

FIG. 1A

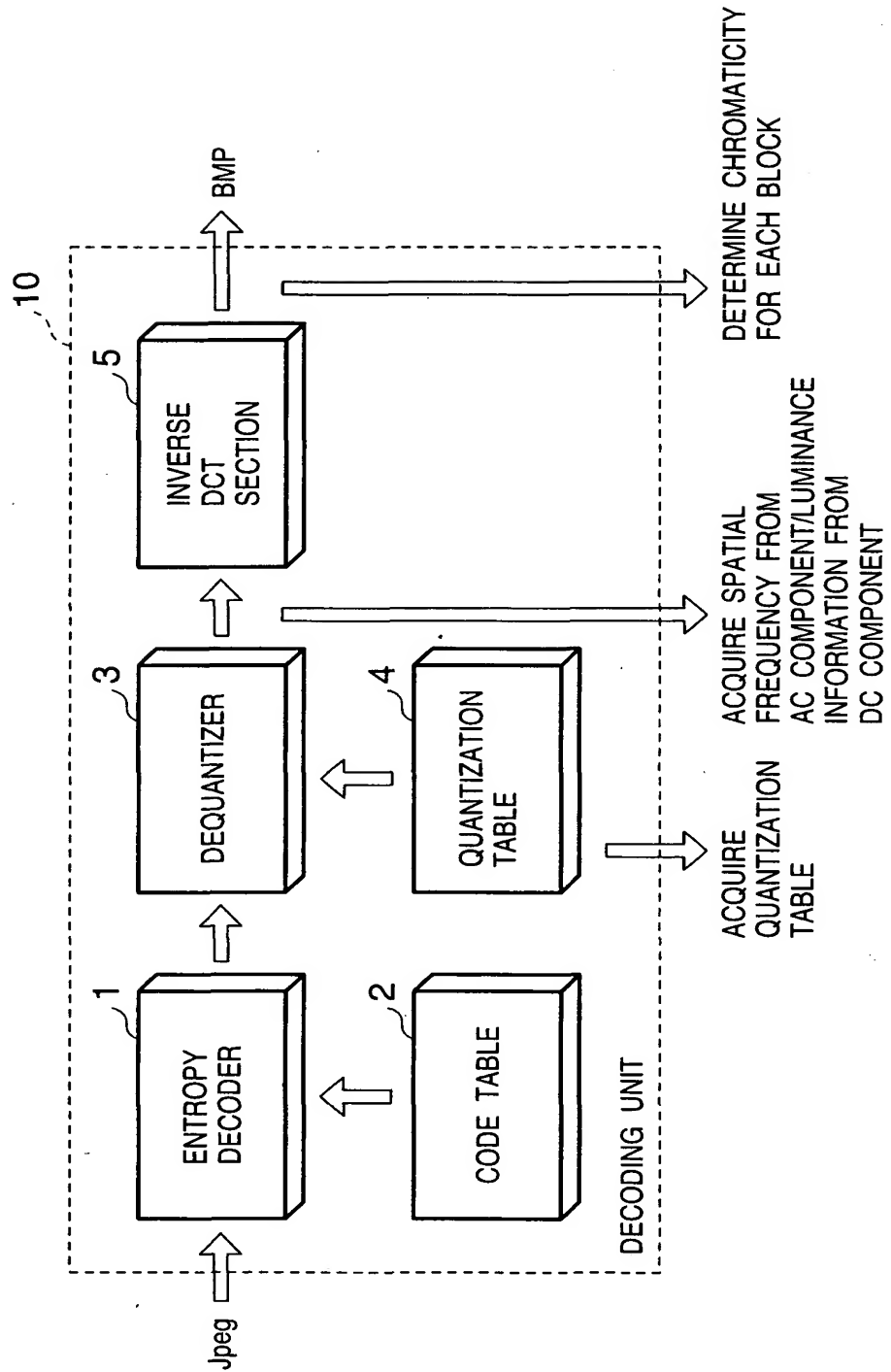


FIG. 1B

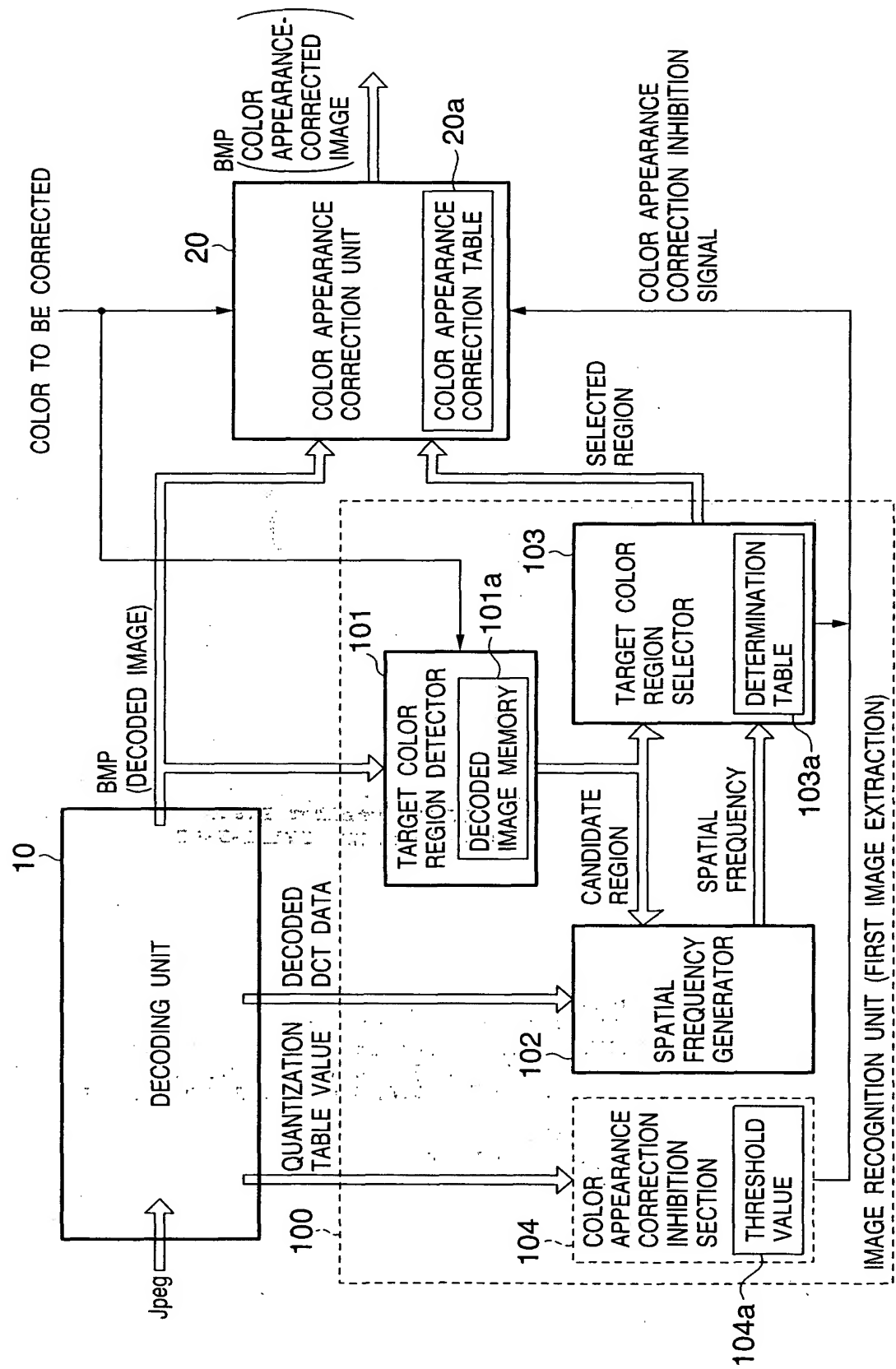


FIG. 1C

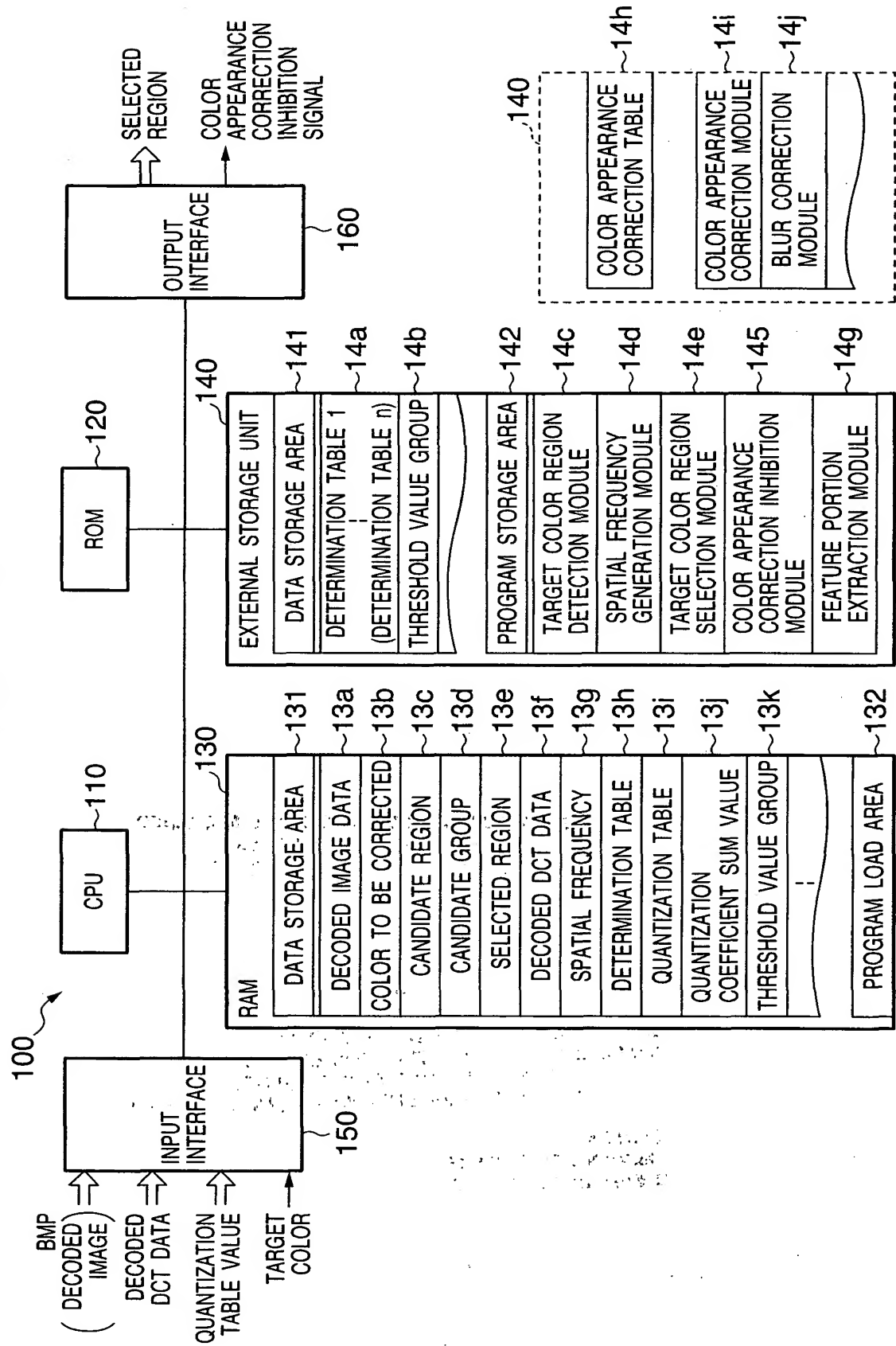


FIG. 2

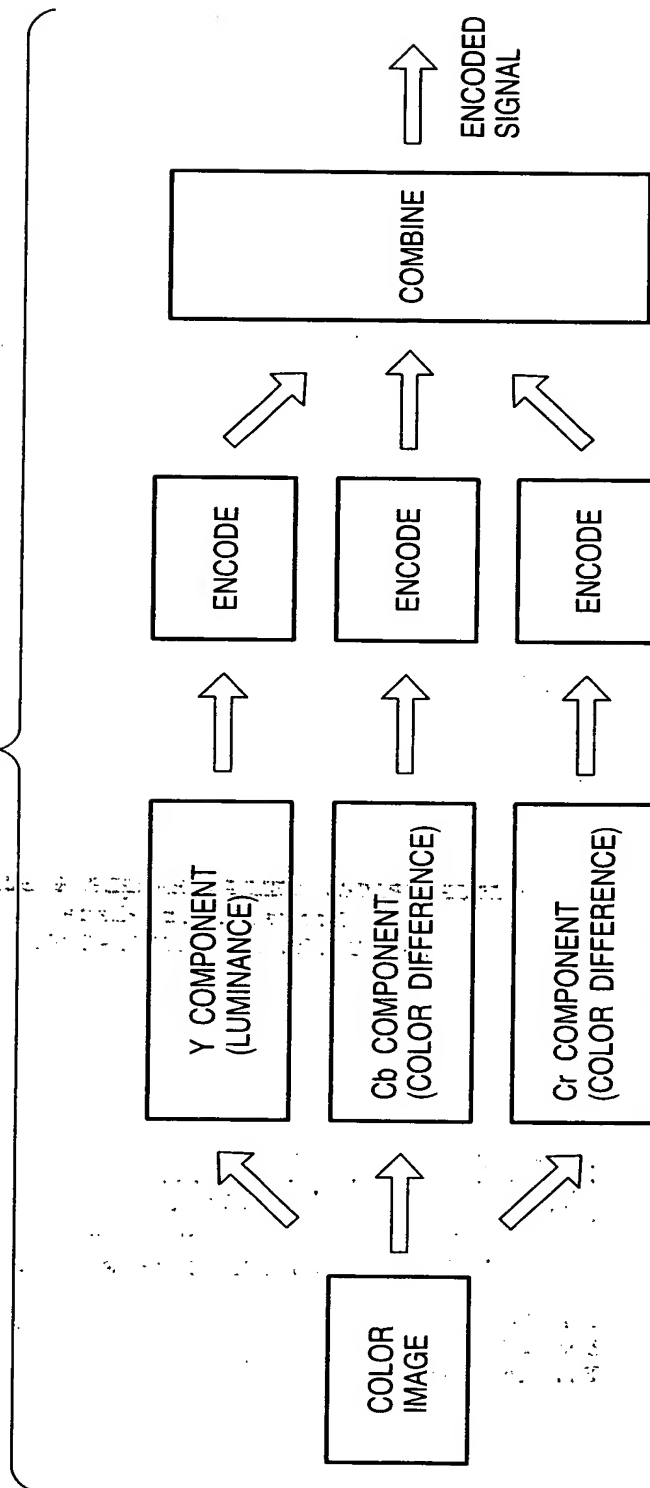


FIG. 3

1. SEGMENT INTO 8*8 BLOCKS

185	177	172	167	161	156	151	150
183	173	167	161	156	149	149	147
183	172	165	159	148	145	145	144
186	172	165	157	145	143	144	142
194	174	159	150	144	142	140	138
199	177	160	152	142	140	149	147
197	178	158	150	140	132	127	126
190	170	153	145	135	129	112	112

2. LEVEL SHIFT(-128)

57	49	44	39	33	28	23	22
55	45	39	33	28	21	21	19
55	44	37	31	20	17	17	16
58	44	37	29	17	15	16	14
66	46	31	22	16	14	12	10
71	49	32	24	14	12	21	19
69	50	30	22	12	4	-1	-2
62	42	25	17	7	1	-16	-16

3. DCT

224	130	40	16	11	8	2	-1
41	-34	-14	-10	-4	0	-1	3
-7	10	-12	2	2	-5	1	-1
22	-7	9	2	0	1	-3	2
-8	4	-6	3	-1	-2	4	-1
5	2	-1	-4	0	1	-1	-1
4	-5	3	-1	0	2	0	-1
-5	5	-2	3	0	-2	1	-1

5. QUANTIZATION

28	22	8	2	1	0	0	0
7	-6	-2	-1	0	0	0	0
-1	1	-2	0	0	0	0	0
3	-1	1	0	0	0	0	0
-1	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

4. QUANTIZATION TABLE

8	6	5	8	12	20	26	30
6	6	7	10	13	29	30	28
7	7	8	12	20	29	35	28
7	9	11	15	26	44	40	31
9	11	19	28	34	55	52	39
12	18	28	32	41	52	57	46
25	32	39	44	52	61	60	51
36	46	48	49	56	50	52	51

⇒ ENTROPY ENCODING

FIG. 4

VGA	1~10		11~20		21~30		31~40		41~50		51~60		61~	
	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL
~L8	50	300	5	100	0	60	0	45	0	30	0	10	0	0
L9~20	50	190	5	60	0	30	0	20	0	10	0	0	0	0
L21~	25	100	5	35	0	15	0	10	0	10	0	2	0	0

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FIG. 5

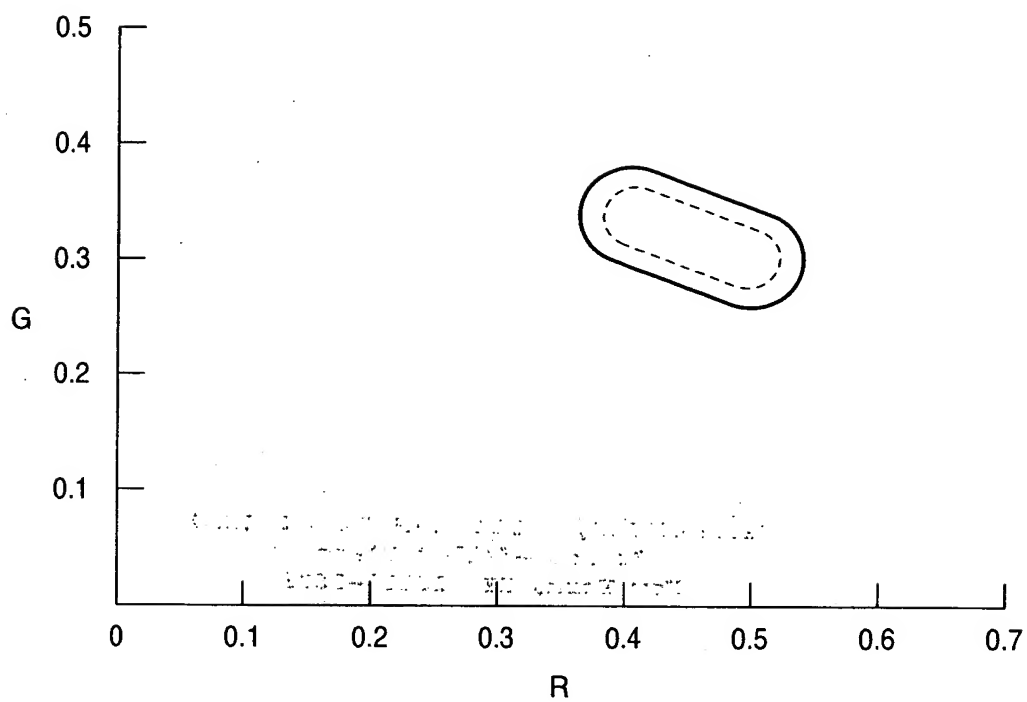


FIG. 6

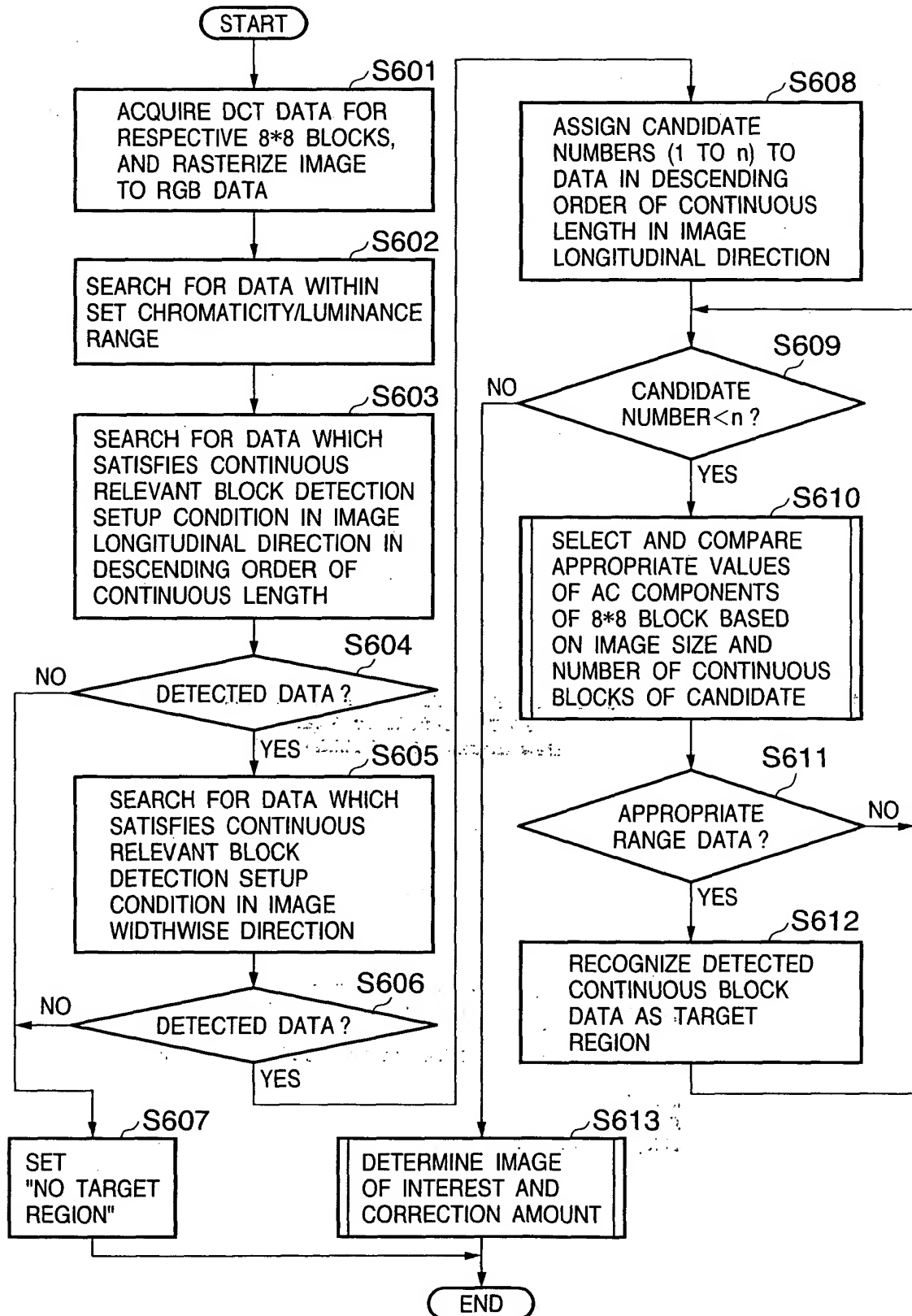
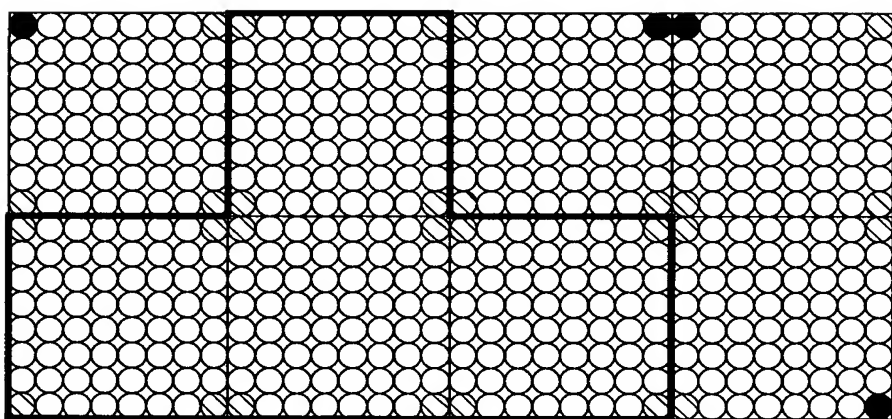
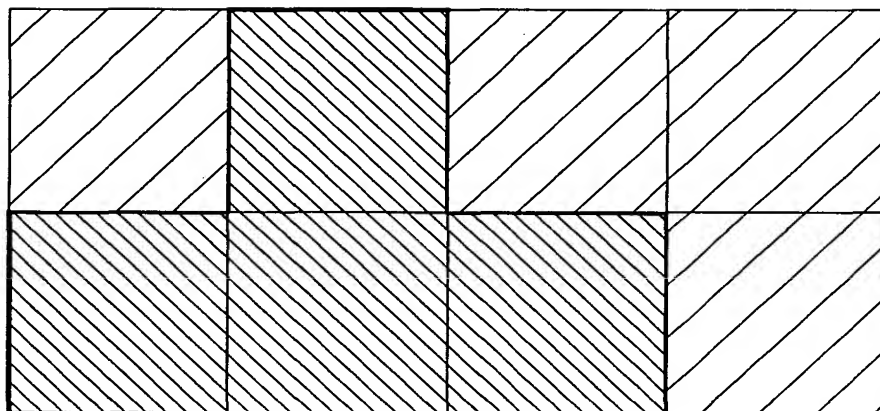


FIG. 7



- NON-DETECTED PIXEL
- ⊗ FLESH COLOR PIXEL
- NON-FLESH COLOR PIXEL
- FLESH COLOR CONTINUOUS DETECTION CANDIDATE BLOCK

FIG. 8

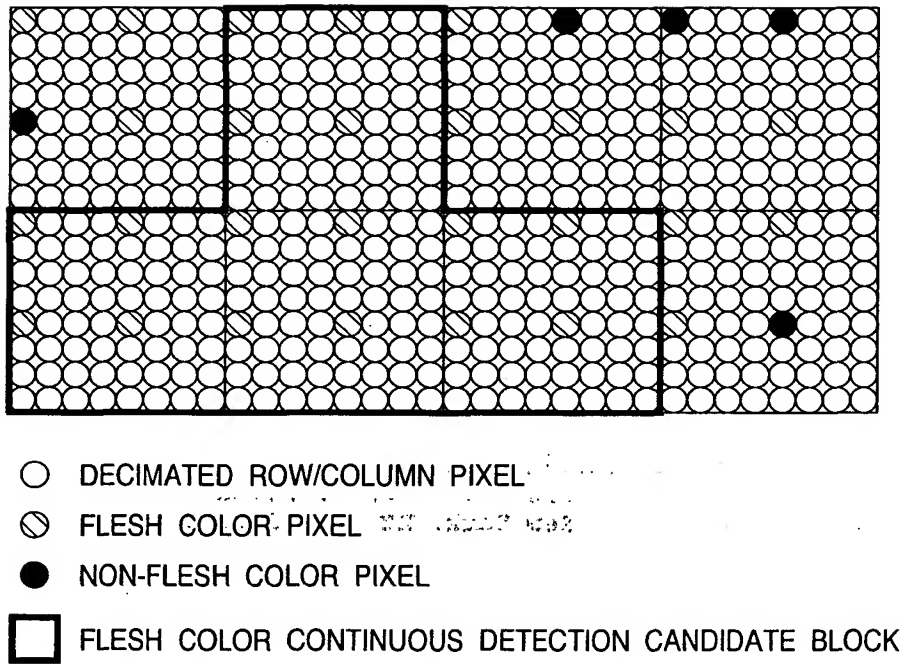


FLESH COLOR BLOCK
DETERMINED AS CANDIDATE OF CONTINUOUS DETECTION



NON-FLESH COLOR BLOCK
NOT DETERMINED AS CANDIDATE OF CONTINUOUS DETECTION

FIG. 9

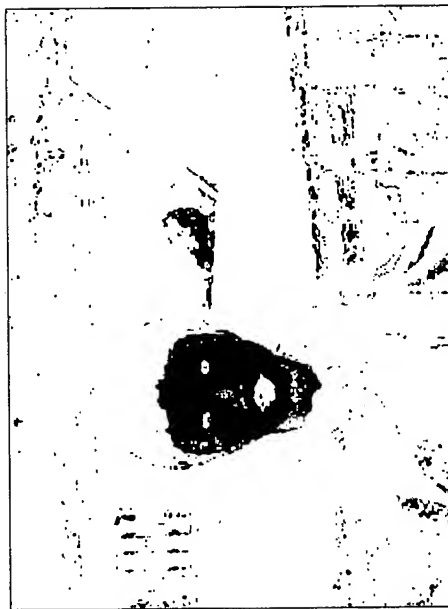


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FIG. 10



FIG. 11



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FIG. 12

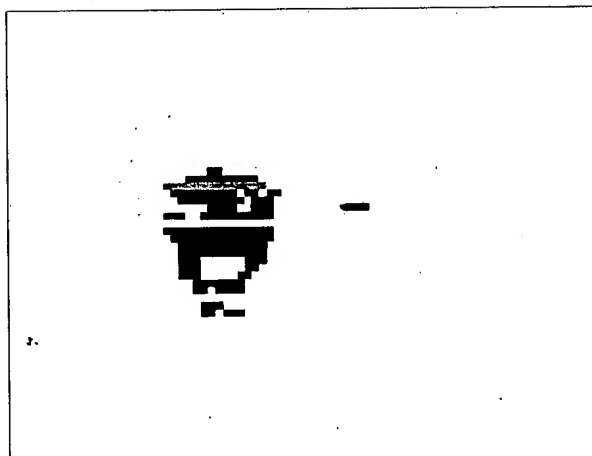


FIG. 13

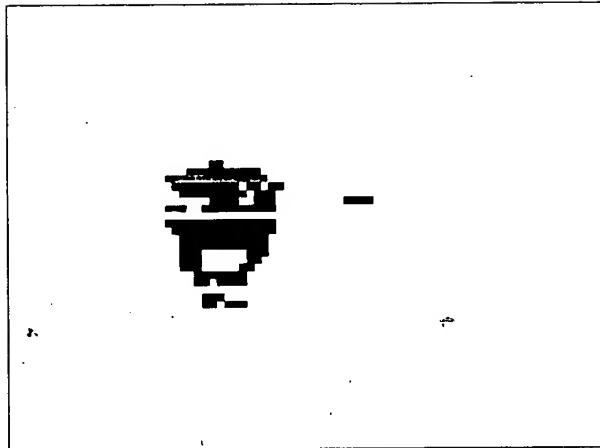


FIG. 14



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FIG. 15

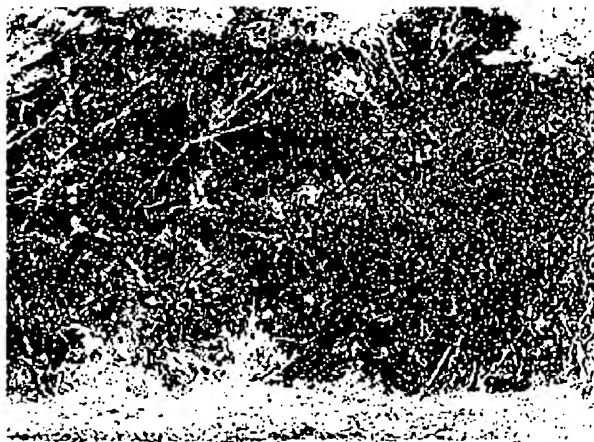
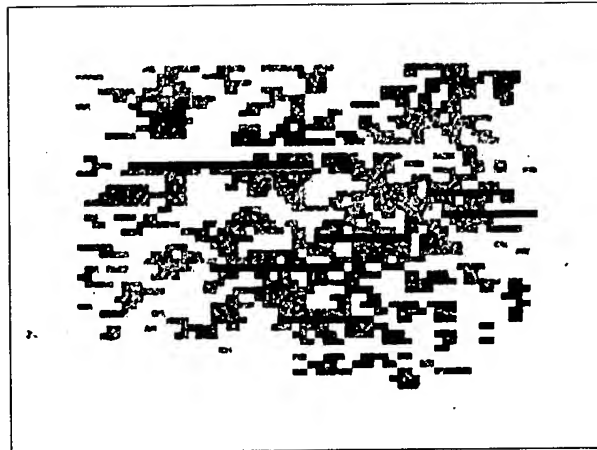


FIG. 16



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FIG. 17.

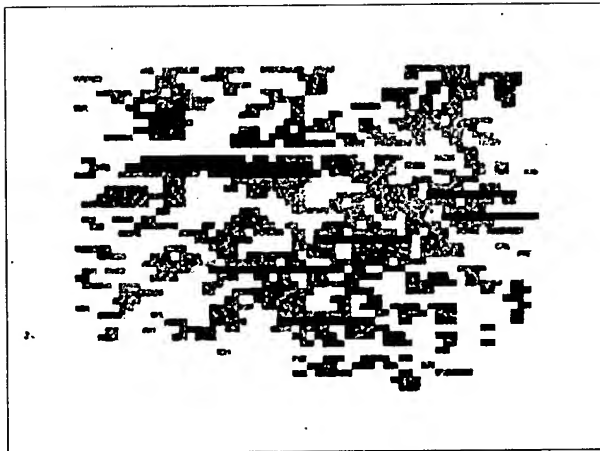


FIG. 18

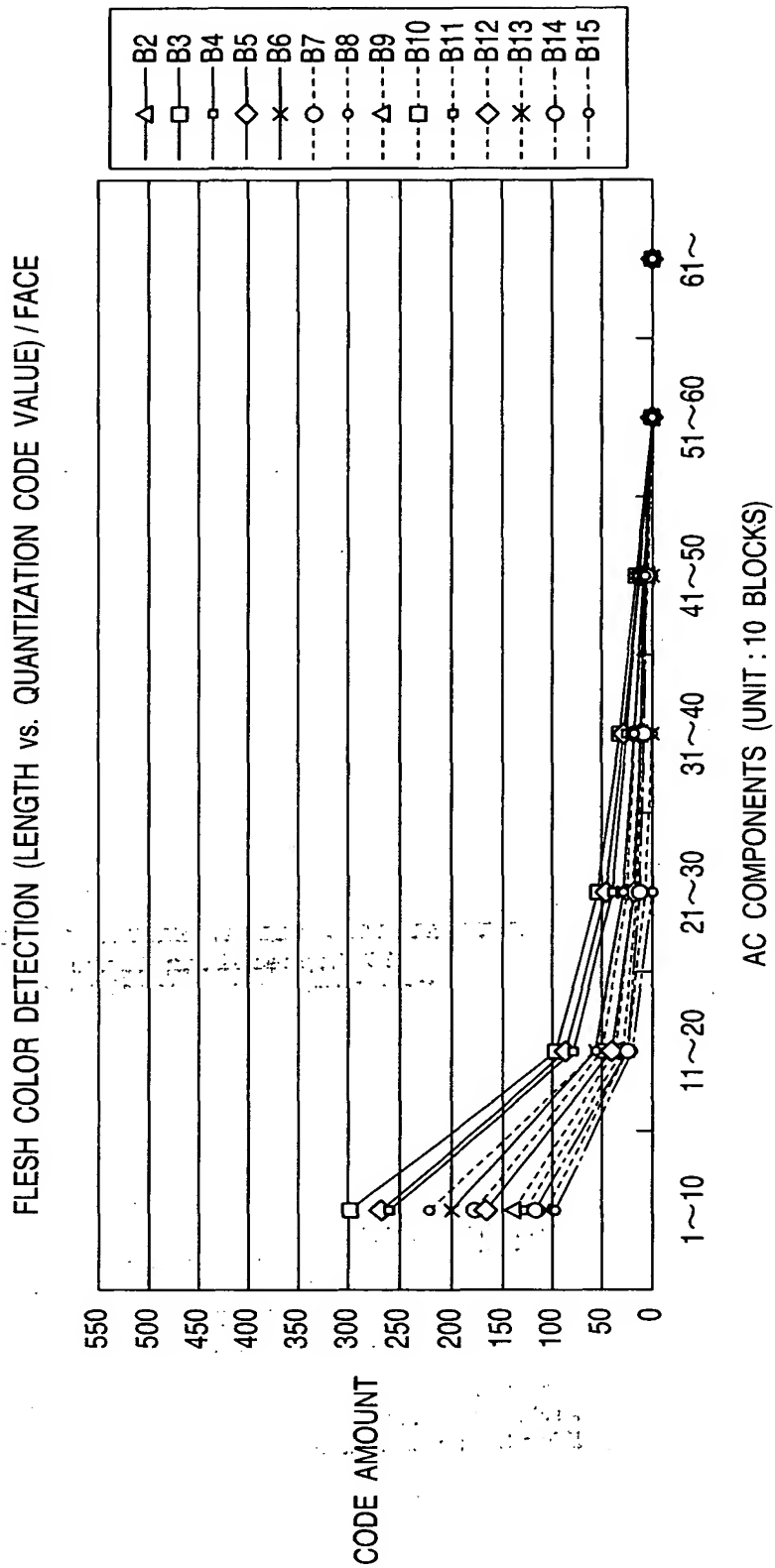
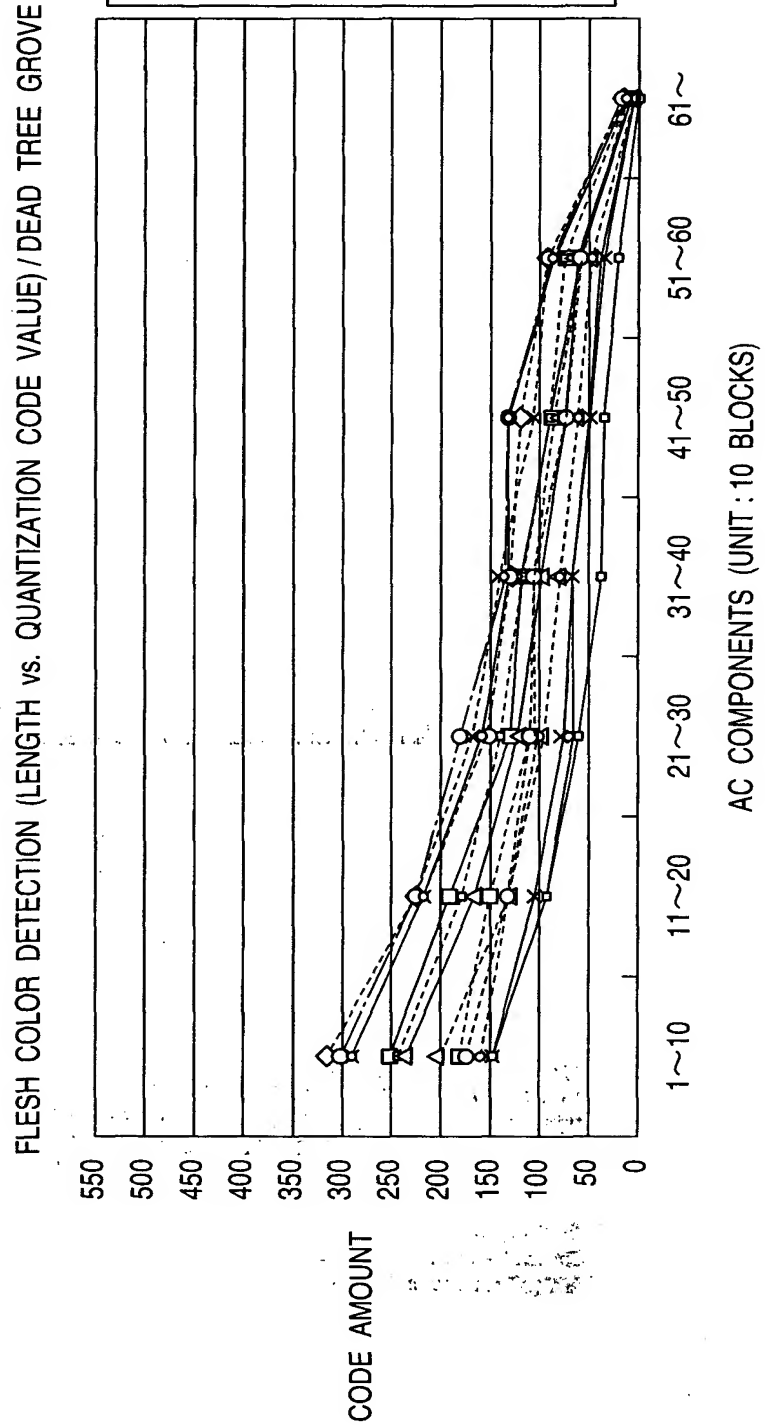


FIG. 19



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FIG. 20

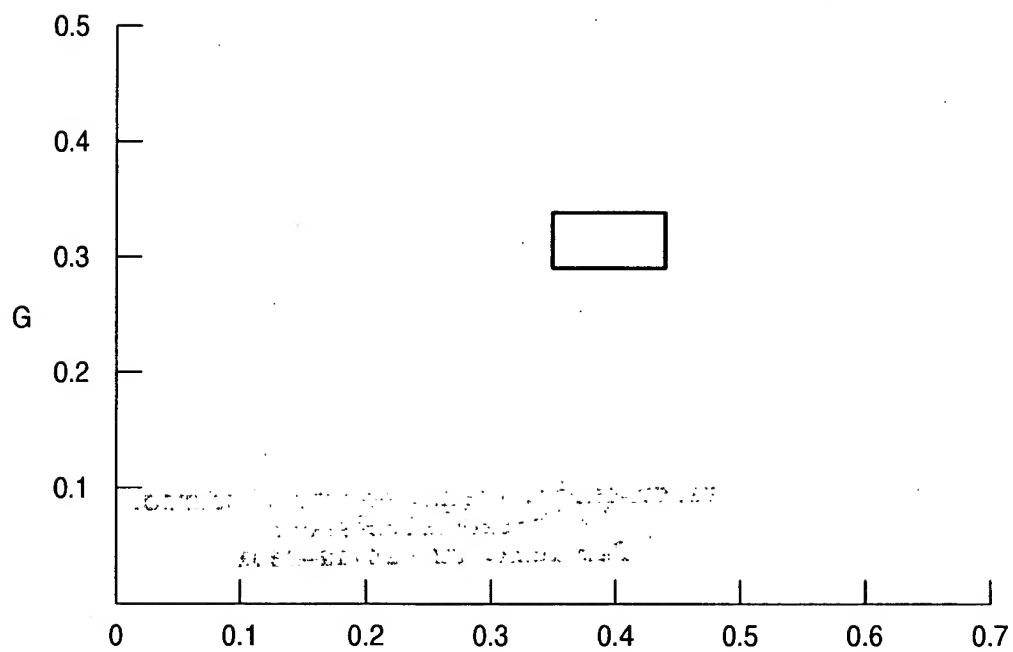


FIG. 21

ORIGINAL IMAGE



BOUNDARY BASED
ON FREQUENCY



FIG. 22

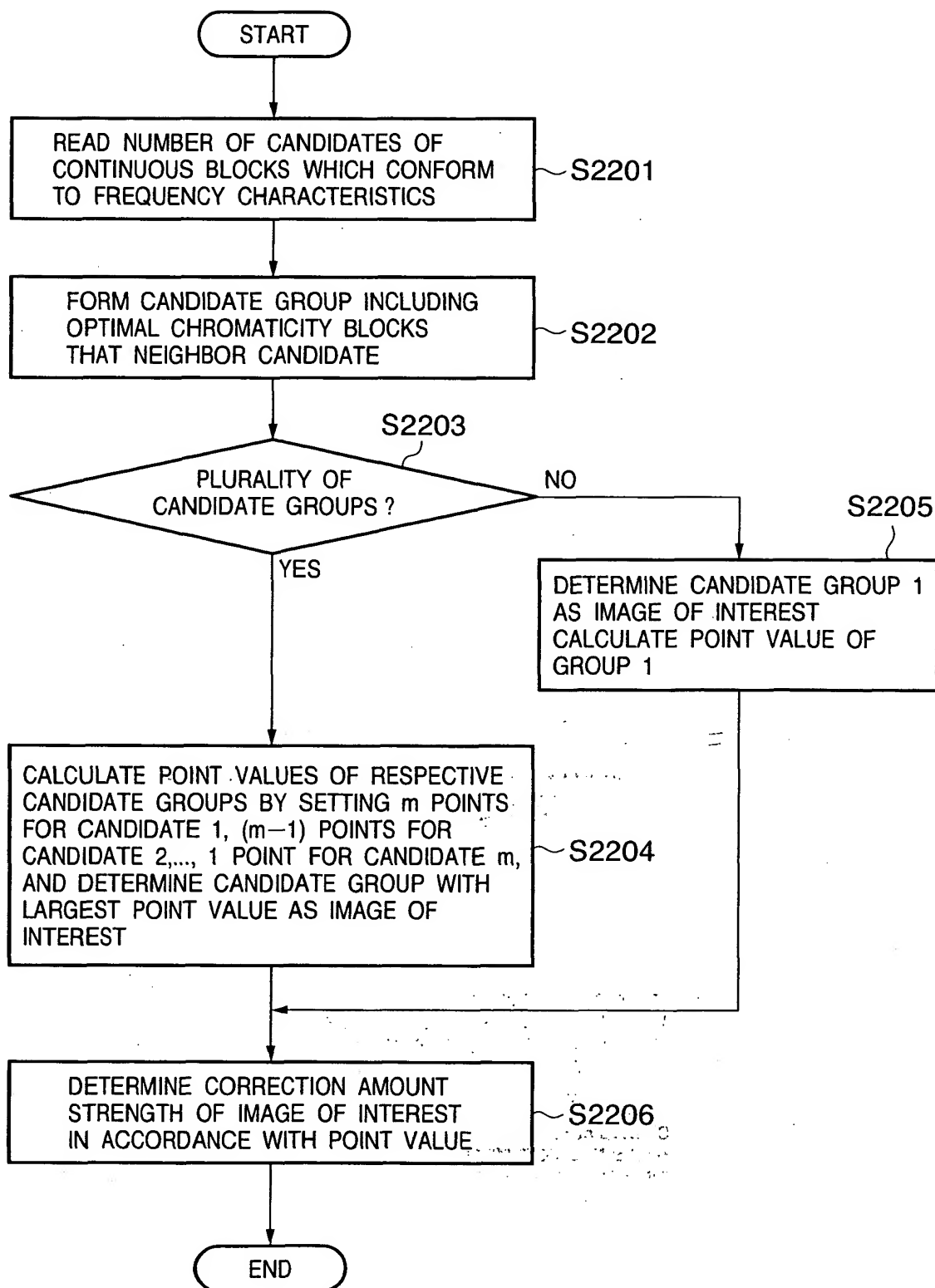


FIG. 23

ORIGINAL IMAGE



CANDIDATE GROUP
DETECTION RESULT

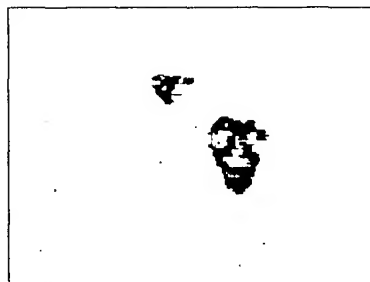


FIG. 24

NORMAL IMAGE
CORRECTION RESULT



IMAGE OF INTEREST
CORRECTION RESULT



FIG. 25

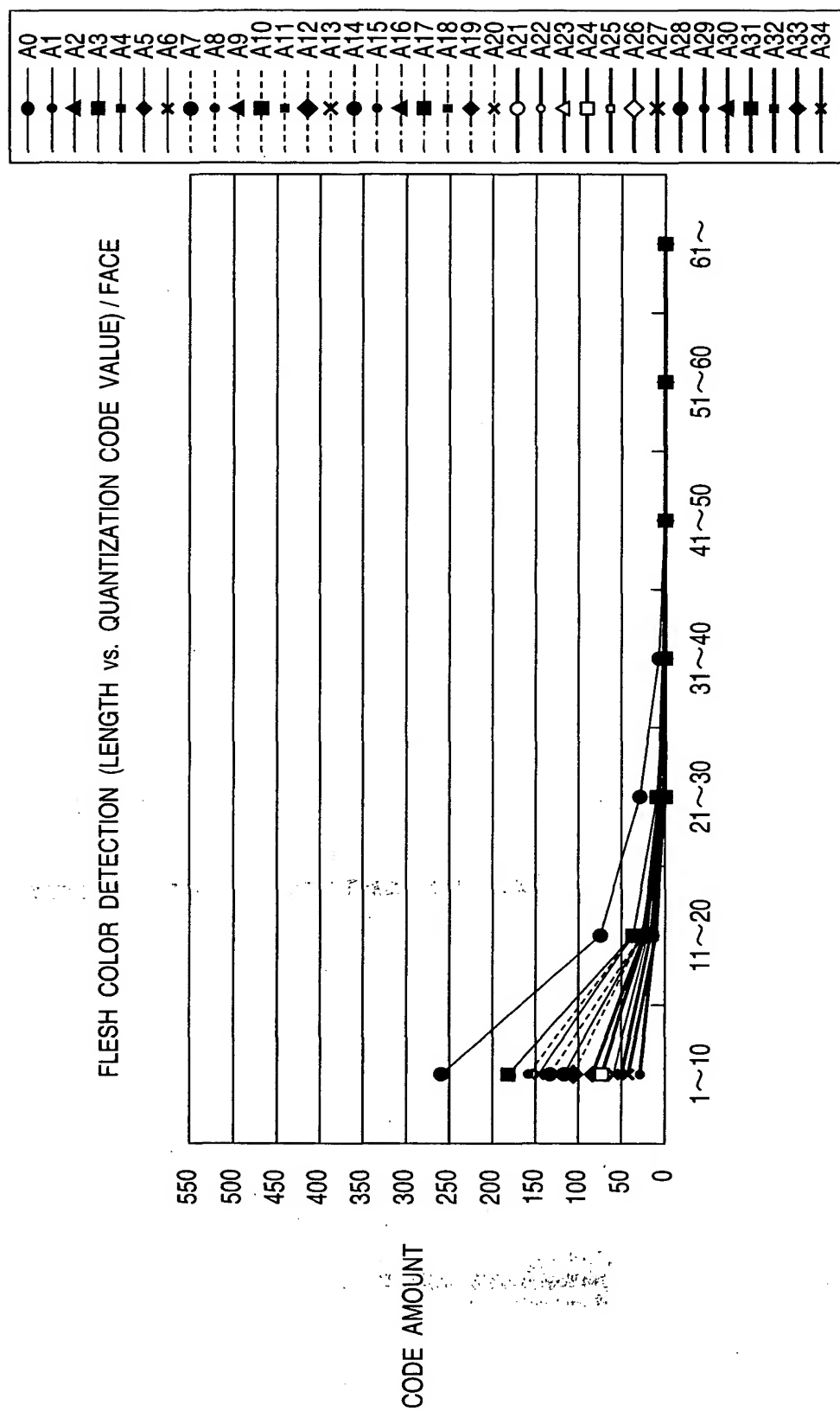


FIG. 26

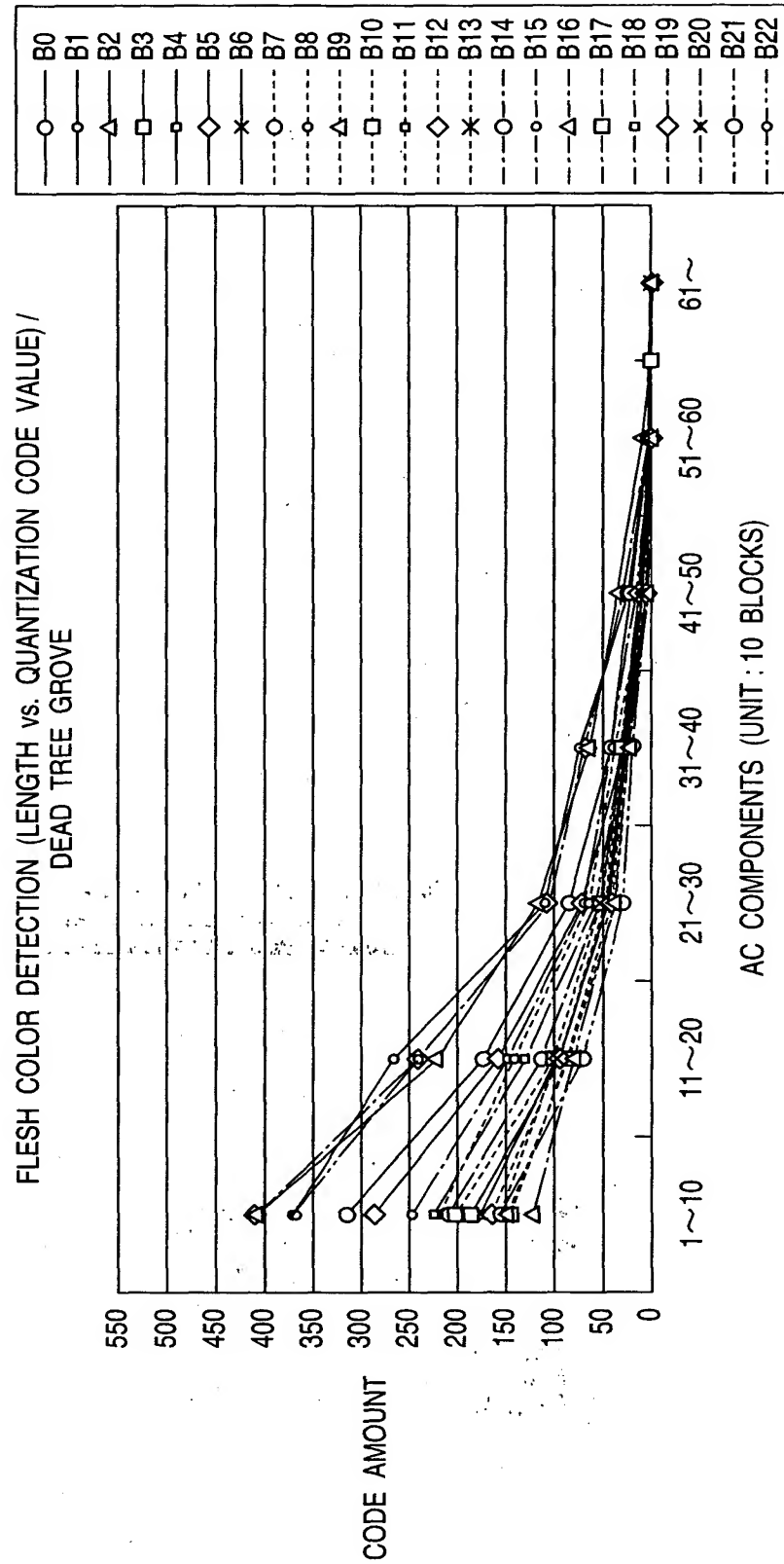


FIG. 27

UXGA	1~10		11~20		21~30		31~40		41~50		51~60		61~	
	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL
~L12	60	200	10	60	0	30	0	20	0	7	0	0	0	0
L13~20	30	170	10	50	0	20	0	10	0	0	0	0	0	0
L21~	30	100	5	35	0	10	0	7	0	0	0	0	0	0

FIG. 28

Table00 : LOW IMAGE QUALITY
(HIGH COMPRESSION RATIO)

32, 33, 51, 81, 66, 39, 34, 17,
33, 36, 48, 47, 28, 23, 12, 12,
51, 48, 47, 28, 23, 12, 12, 12,
81, 47, 28, 23, 12, 12, 12, 12,
66, 28, 23, 12, 12, 12, 12, 12,
39, 23, 12, 12, 12, 12, 12, 12,
34, 12, 12, 12, 12, 12, 12, 12,
17, 12, 12, 12, 12, 12, 12, 12,

Table01 : LOW IMAGE QUALITY
(HIGH COMPRESSION RATIO)

27, 26, 41, 65, 66, 39, 34, 17,
26, 29, 38, 47, 28, 23, 12, 12,
41, 38, 47, 28, 23, 12, 12, 12,
65, 47, 28, 23, 12, 12, 12, 12,
66, 28, 23, 12, 12, 12, 12, 12,
39, 23, 12, 12, 12, 12, 12, 12,
34, 12, 12, 12, 12, 12, 12, 12,
17, 12, 12, 12, 12, 12, 12, 12,

Table02 : LOW IMAGE QUALITY
(HIGH COMPRESSION RATIO)

20, 17, 26, 41, 51, 39, 34, 17,
17, 18, 24, 39, 28, 23, 12, 12,
26, 24, 32, 28, 23, 12, 12, 12,
41, 39, 28, 23, 12, 12, 12, 12,
51, 28, 23, 12, 12, 12, 12, 12,
39, 23, 12, 12, 12, 12, 12, 12,
34, 12, 12, 12, 12, 12, 12, 12,
17, 12, 12, 12, 12, 12, 12, 12,

Table03 : LOW IMAGE QUALITY
(HIGH COMPRESSION RATIO)

18, 14, 14, 21, 30, 35, 34, 17,
14, 16, 16, 19, 26, 23, 12, 12,
14, 16, 17, 21, 23, 12, 12, 12,
21, 19, 21, 23, 12, 12, 12, 12,
30, 26, 23, 12, 12, 12, 12, 12,
35, 23, 12, 12, 12, 12, 12, 12,
34, 12, 12, 12, 12, 12, 12, 12,
17, 12, 12, 12, 12, 12, 12, 12,

Table04 : LOW IMAGE QUALITY
(HIGH COMPRESSION RATIO)

16, 11, 11, 16, 23, 27, 31, 17,
11, 12, 12, 15, 20, 23, 12, 12,
11, 12, 13, 16, 23, 12, 12, 12,
16, 15, 16, 23, 12, 12, 12, 12,
23, 20, 23, 12, 12, 12, 12, 12,
27, 23, 12, 12, 12, 12, 12, 12,
31, 12, 12, 12, 12, 12, 12, 12,
17, 12, 12, 12, 12, 12, 12, 12,

Table05 : STANDARD

12, 8, 8, 12, 17, 21, 24, 17,
8, 9, 9, 11, 15, 19, 12, 12,
8, 9, 10, 12, 19, 12, 12, 12,
12, 11, 12, 21, 12, 12, 12, 12,
17, 15, 19, 12, 12, 12, 12, 12,
21, 19, 12, 12, 12, 12, 12, 12,
24, 12, 12, 12, 12, 12, 12, 12,
17, 12, 12, 12, 12, 12, 12, 12,

FIG. 29

Table06 : STANDARD

8,	6,	6,	8,	12,	14,	16,	17,
6,	6,	6,	8,	10,	13,	12,	12,
6,	6,	7,	8,	13,	12,	12,	12,
8,	8,	8,	14,	12,	12,	12,	12,
12,	10,	13,	12,	12,	12,	12,	12,
14,	13,	12,	12,	12,	12,	12,	12,
16,	12,	12,	12,	12,	12,	12,	12,
17,	12,	12,	12,	12,	12,	12,	12,

Table07 : STANDARD

10,	7,	7,	10,	15,	18,	20,	17,
7,	8,	8,	10,	13,	16,	12,	12,
7,	8,	8,	10,	16,	12,	12,	12,
10,	10,	10,	18,	12,	12,	12,	12,
15,	13,	16,	12,	12,	12,	12,	12,
18,	16,	12,	12,	12,	12,	12,	12,
20,	12,	12,	12,	12,	12,	12,	12,
17,	12,	12,	12,	12,	12,	12,	12,

Table08 : HIGH IMAGE QUALITY

6,	4,	4,	6,	9,	11,	12,	16,
4,	5,	5,	6,	8,	10,	12,	12,
4,	5,	5,	6,	10,	12,	12,	12,
6,	6,	6,	11,	12,	12,	12,	12,
9,	8,	10,	12,	12,	12,	12,	12,
11,	10,	12,	12,	12,	12,	12,	12,
12,	12,	12,	12,	12,	12,	12,	12,
16,	12,	12,	12,	12,	12,	12,	12,

Table09 : HIGH IMAGE QUALITY

4,	3,	3,	4,	6,	7,	8,	10,
3,	3,	3,	4,	5,	6,	8,	10,
3,	3,	3,	4,	6,	9,	12,	12,
4,	4,	4,	7,	9,	12,	12,	12,
6,	5,	6,	9,	12,	12,	12,	12,
7,	6,	9,	12,	12,	12,	12,	12,
8,	8,	12,	12,	12,	12,	12,	12,
10,	10,	12,	12,	12,	12,	12,	12,

Table10 : HIGHEST IMAGE QUALITY
(LOW COMPRESSION RATIO)

2,	2,	2,	2,	3,	4,	5,	6,
2,	2,	2,	2,	3,	4,	5,	6,
2,	2,	2,	2,	4,	5,	7,	9,
2,	2,	2,	4,	5,	7,	9,	12,
3,	3,	4,	5,	8,	10,	12,	12,
4,	4,	5,	7,	10,	12,	12,	12,
5,	5,	7,	9,	12,	12,	12,	12,
6,	6,	9,	12,	12,	12,	12,	12,

Table11 : HIGHEST IMAGE QUALITY
(LOW COMPRESSION RATIO)

1,	1,	1,	1,	2,	2,	2,	3,
1,	1,	1,	1,	1,	2,	2,	3,
1,	1,	1,	1,	2,	3,	4,	5,
1,	1,	1,	2,	3,	4,	5,	7,
2,	1,	2,	3,	4,	5,	7,	8,
2,	2,	3,	4,	5,	7,	8,	8,
2,	2,	4,	5,	7,	8,	8,	8,
3,	3,	5,	7,	8,	8,	8,	8,

FIG. 30

Table12 : HIGHEST IMAGE QUALITY
(LOW COMPRESSION RATIO)

1,	1,	1,	1,	1,	1,	1,	1,
1,	1,	1,	1,	1,	1,	1,	1,
1,	1,	1,	1,	1,	1,	1,	2,
1,	1,	1,	1,	1,	1,	2,	2,
1,	1,	1,	1,	1,	2,	2,	3,
1,	1,	1,	1,	2,	2,	3,	3,
1,	1,	1,	2,	2,	3,	3,	3,
1,	1,	2,	2,	3,	3,	3,	3,

TABLE 12 : HIGHEST IMAGE QUALITY
(LOW COMPRESSION RATIO)

FIG. 31

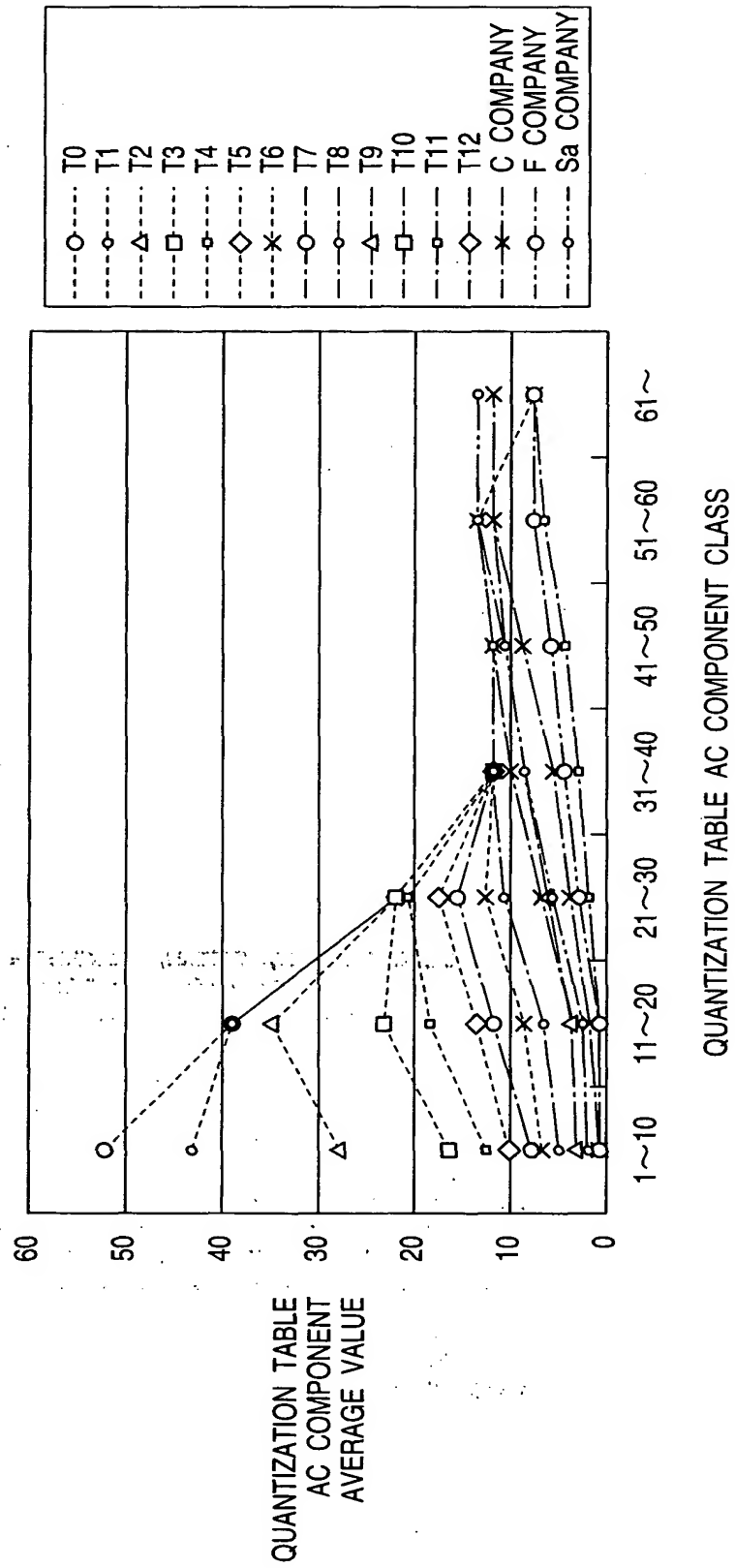


FIG. 32

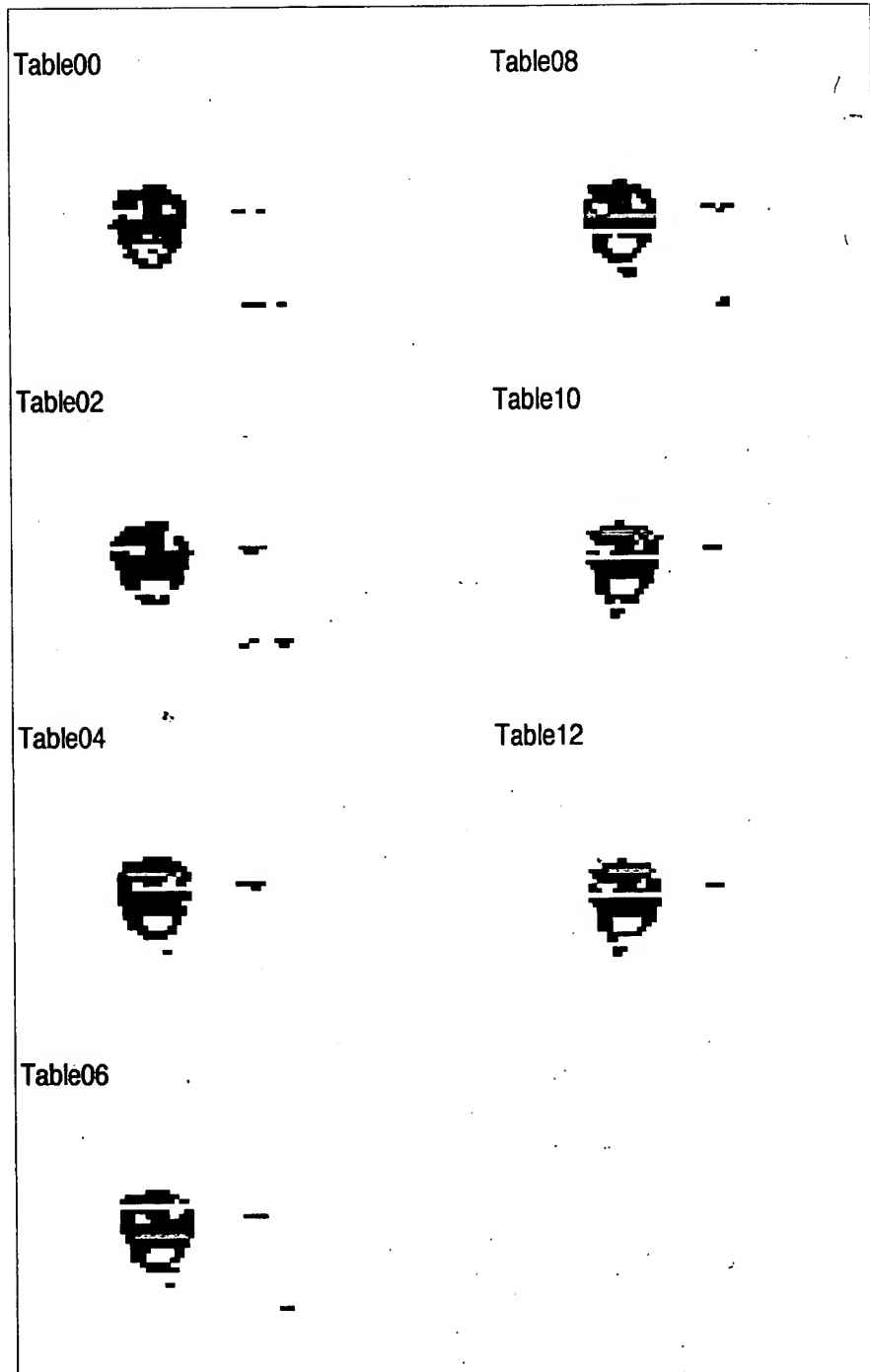


FIG. 33

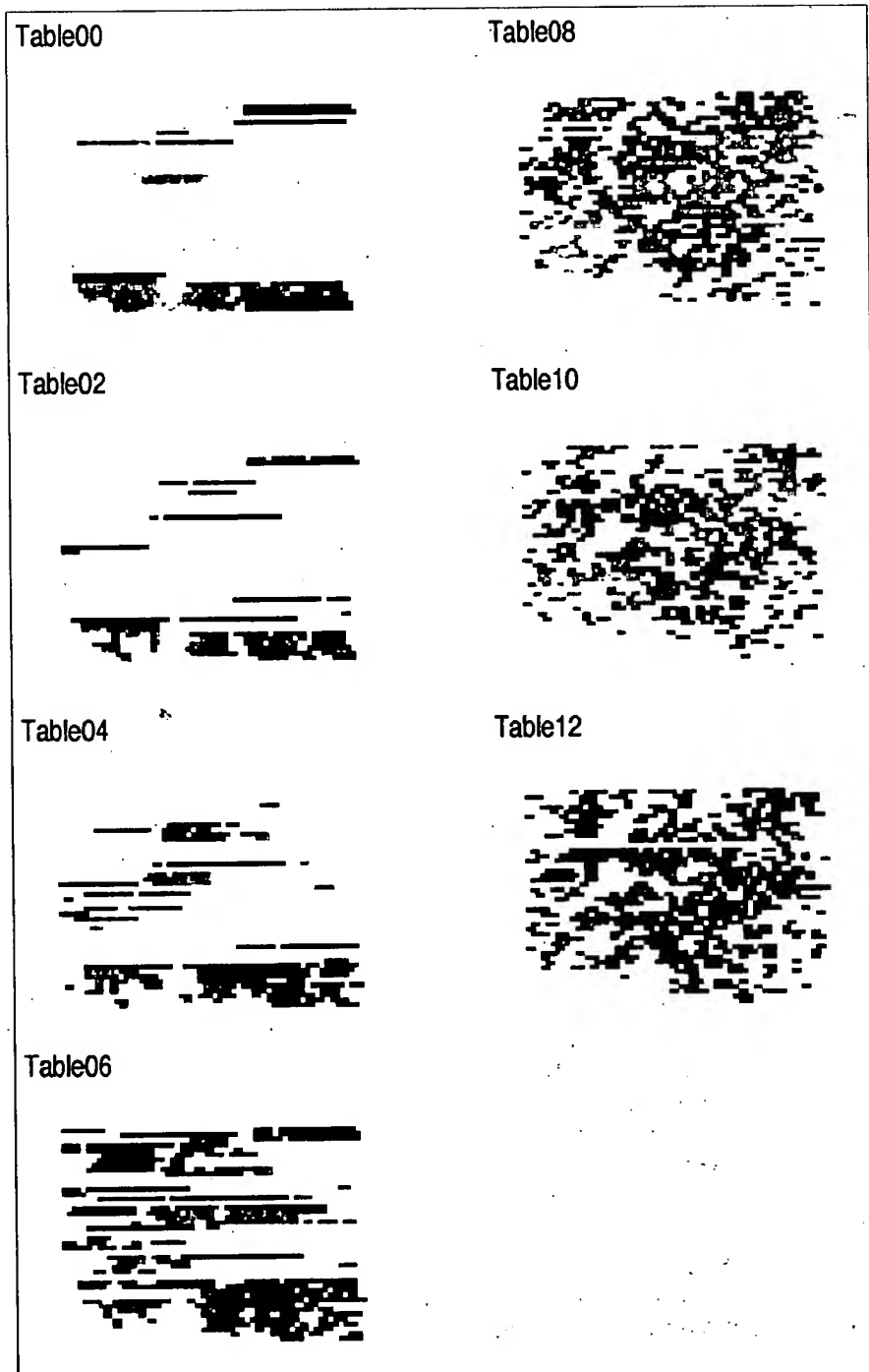


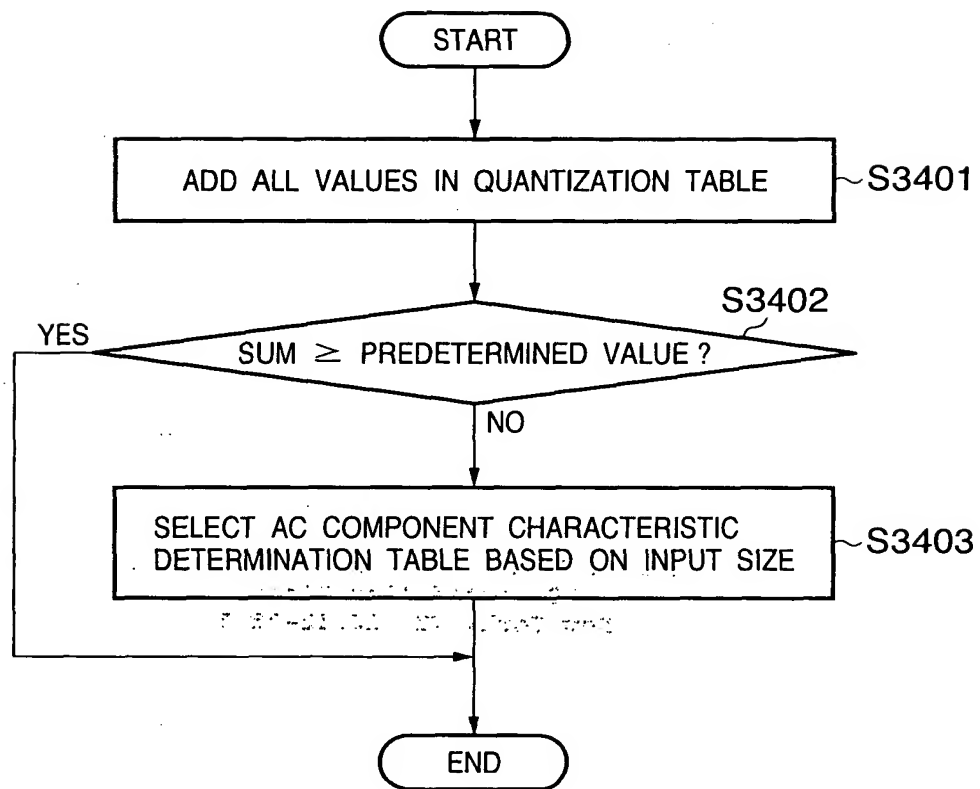
FIG. 34

FIG. 35

APD FOR SKIN
(CHROMATICITY CHARACTERISTICS BASED ON LUMINANCE DISTRIBUTION)

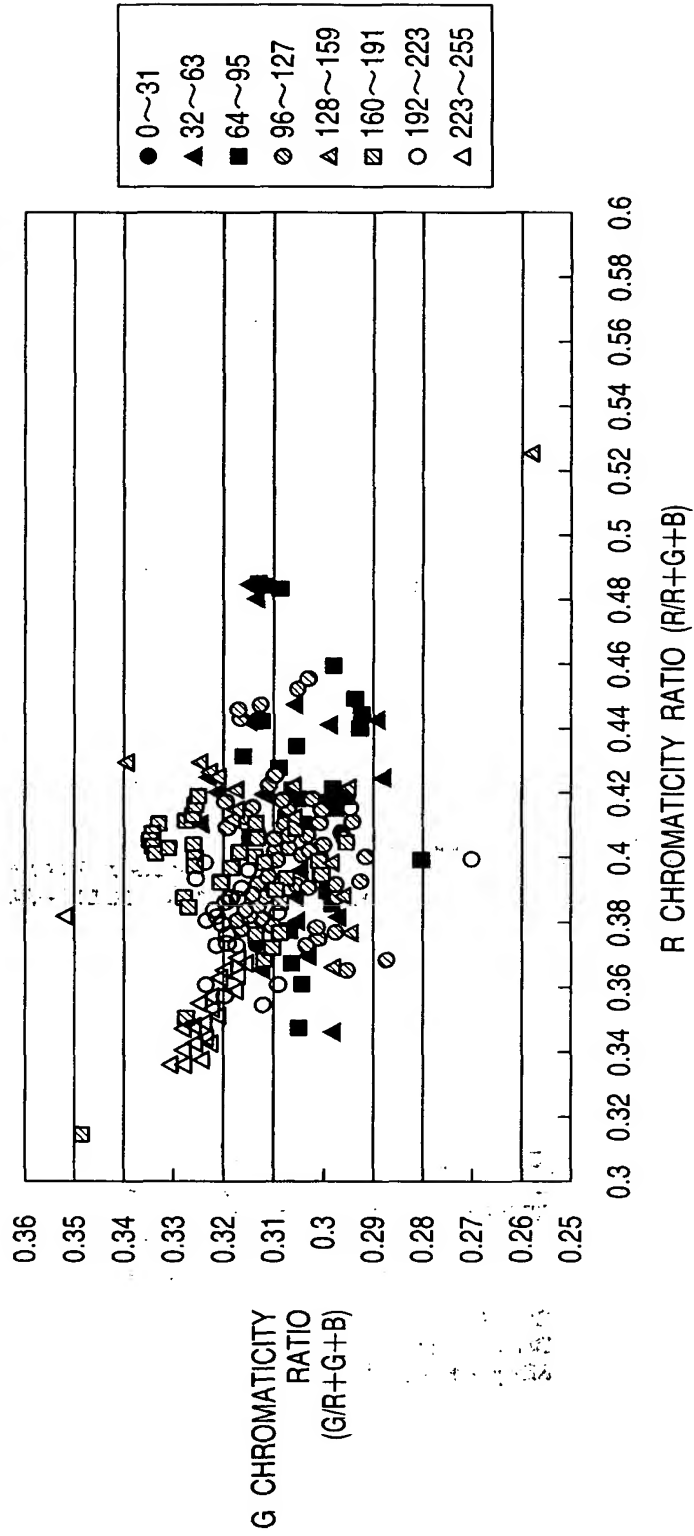


FIG. 36

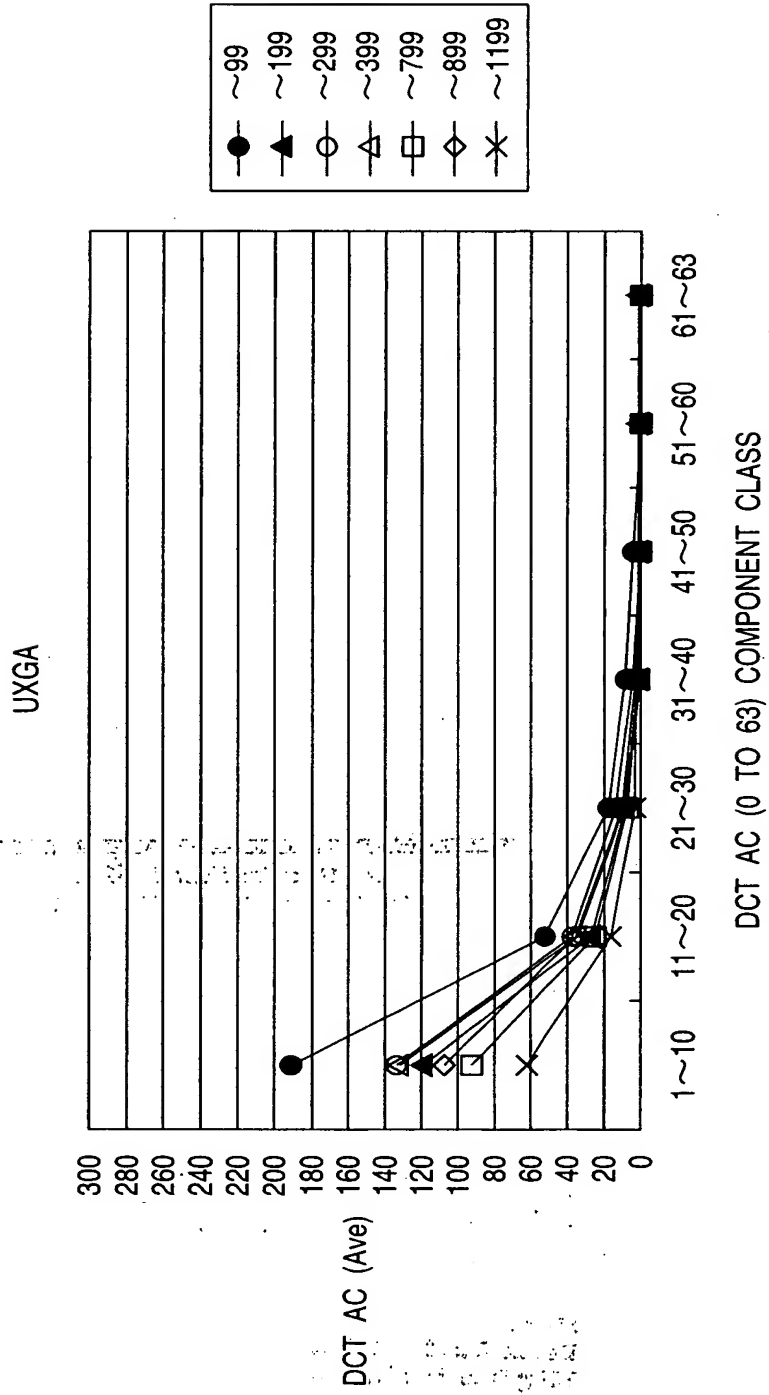


FIG. 37

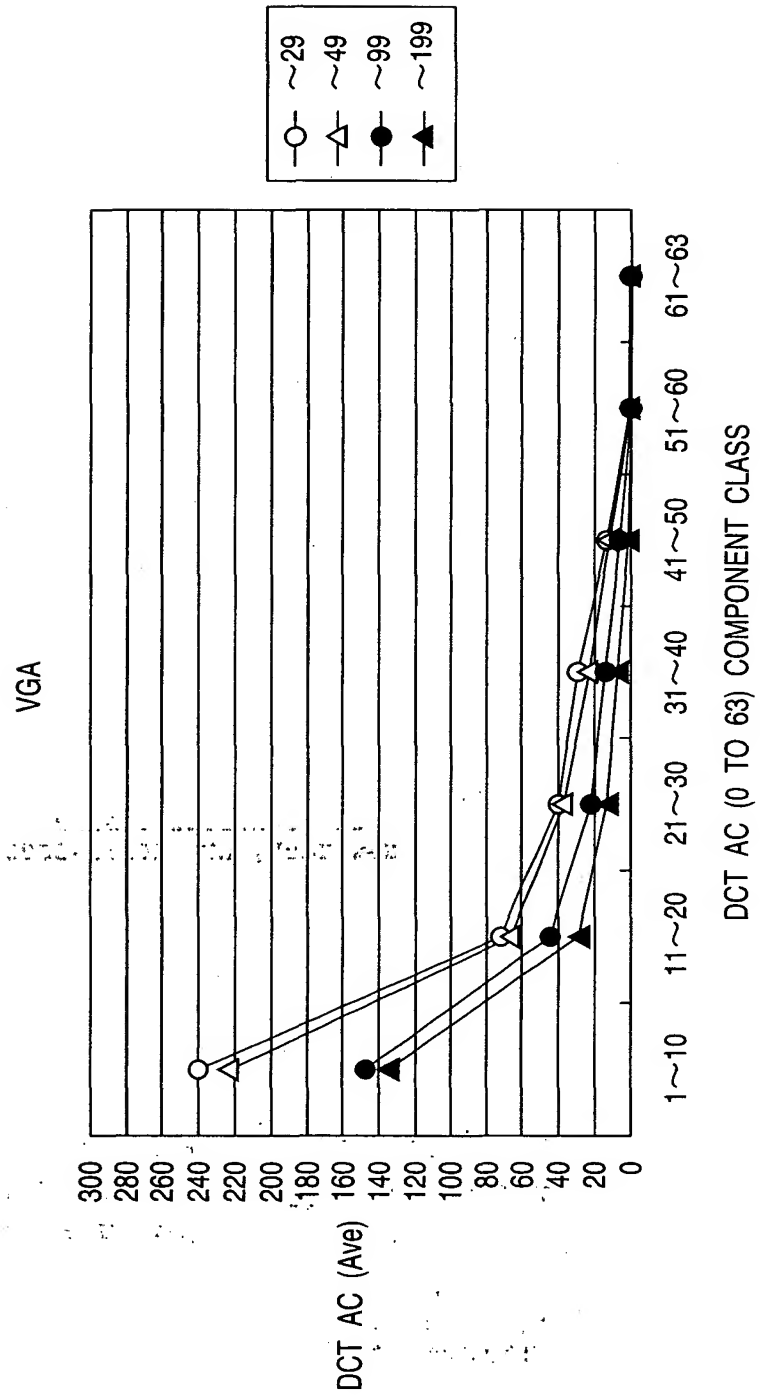


FIG. 38



FIG. 39

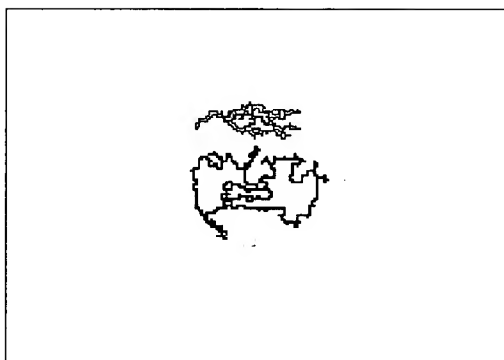


FIG. 40

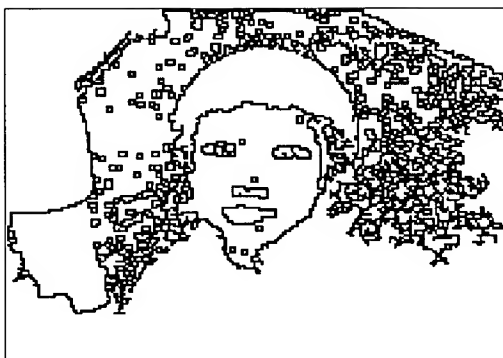


FIG. 41

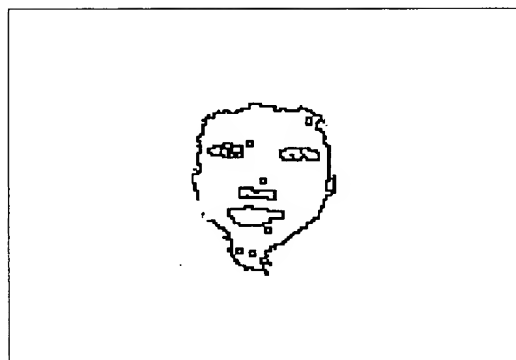


FIG. 42

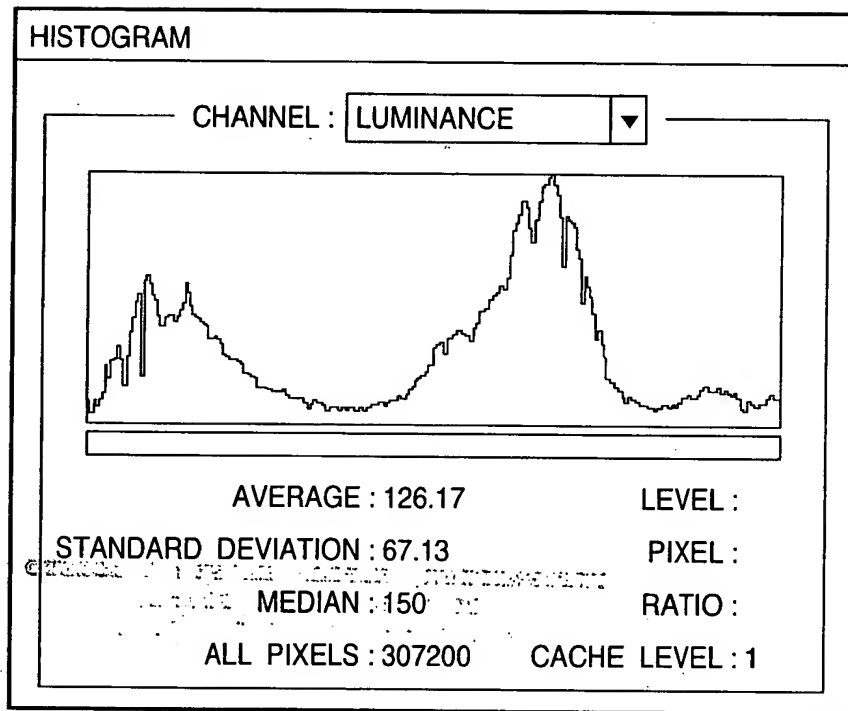
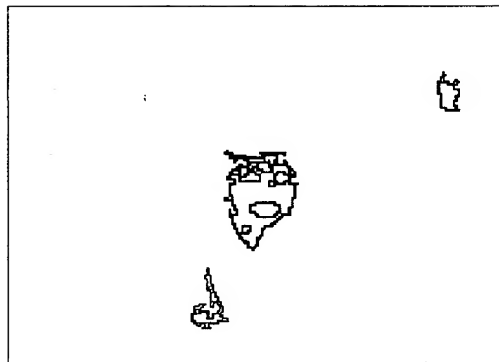


FIG. 43



FIG. 44

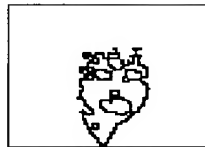


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FIG. 45



FIG. 46



OPTIONAL FORM NO. 10 (Rev. 9-7)

FIG. 47

	1~10		11~20		21~30		31~40		41~50		51~60		61~63	
	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL	LARGER OR EQUAL	LESS OR EQUAL
10~29	100	470	40	140	15	80	10	60	0	40	0	10	0	0
~49	100	350	20	110	5	70	0	45	0	30	0	10	0	0
~99	50	300	10	90	0	50	0	40	0	20	0	10	0	0
~199	50	170	10	50	0	30	0	20	0	10	0	0	0	0
200<	50	150	10	50	0	25	0	15	0	5	0	0	0	0

FIG. 48

LUMINANCE CLASS	R/R+G+B	G/R+G+B
0~160	0.35~0.44	0.29~0.33
161~219	$f1=0.35-(n-160)*0.02$	$f2=0.35-(n-160)*0.01$
220~255	0.33~0.42	0.30~0.34

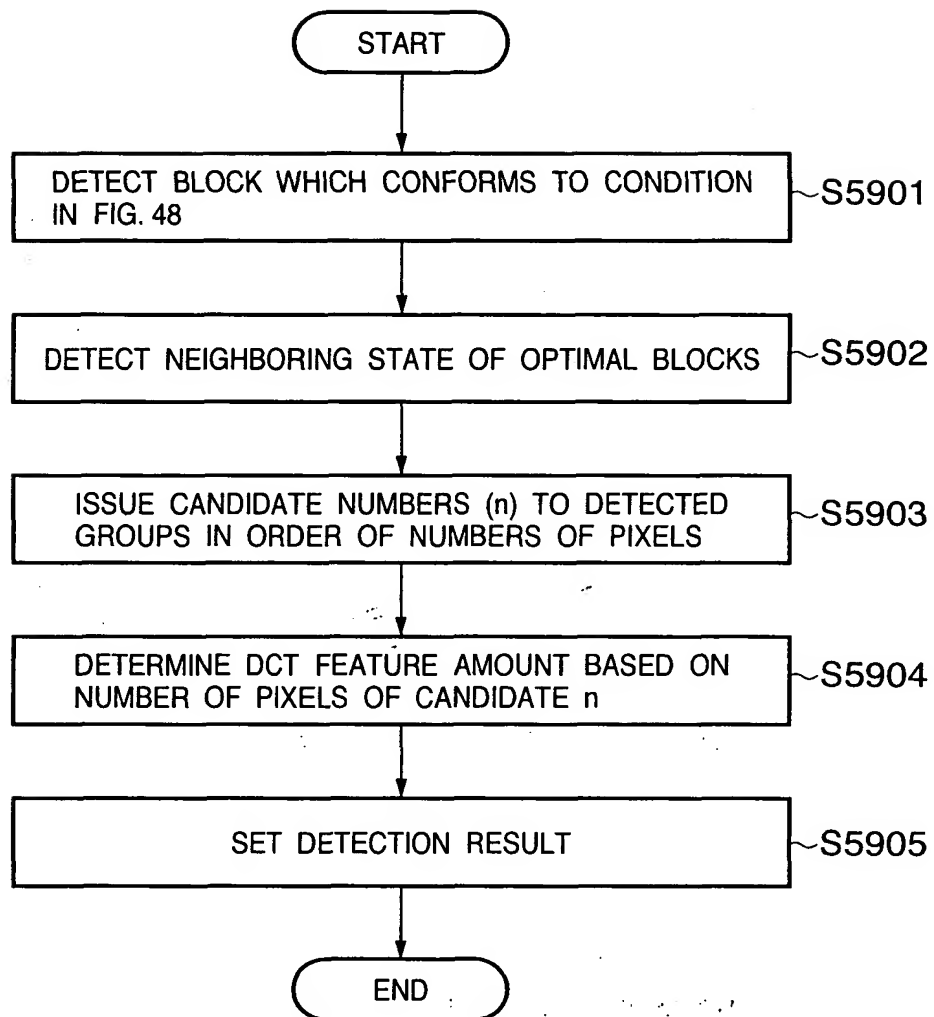
FIG. 49

FIG. 50

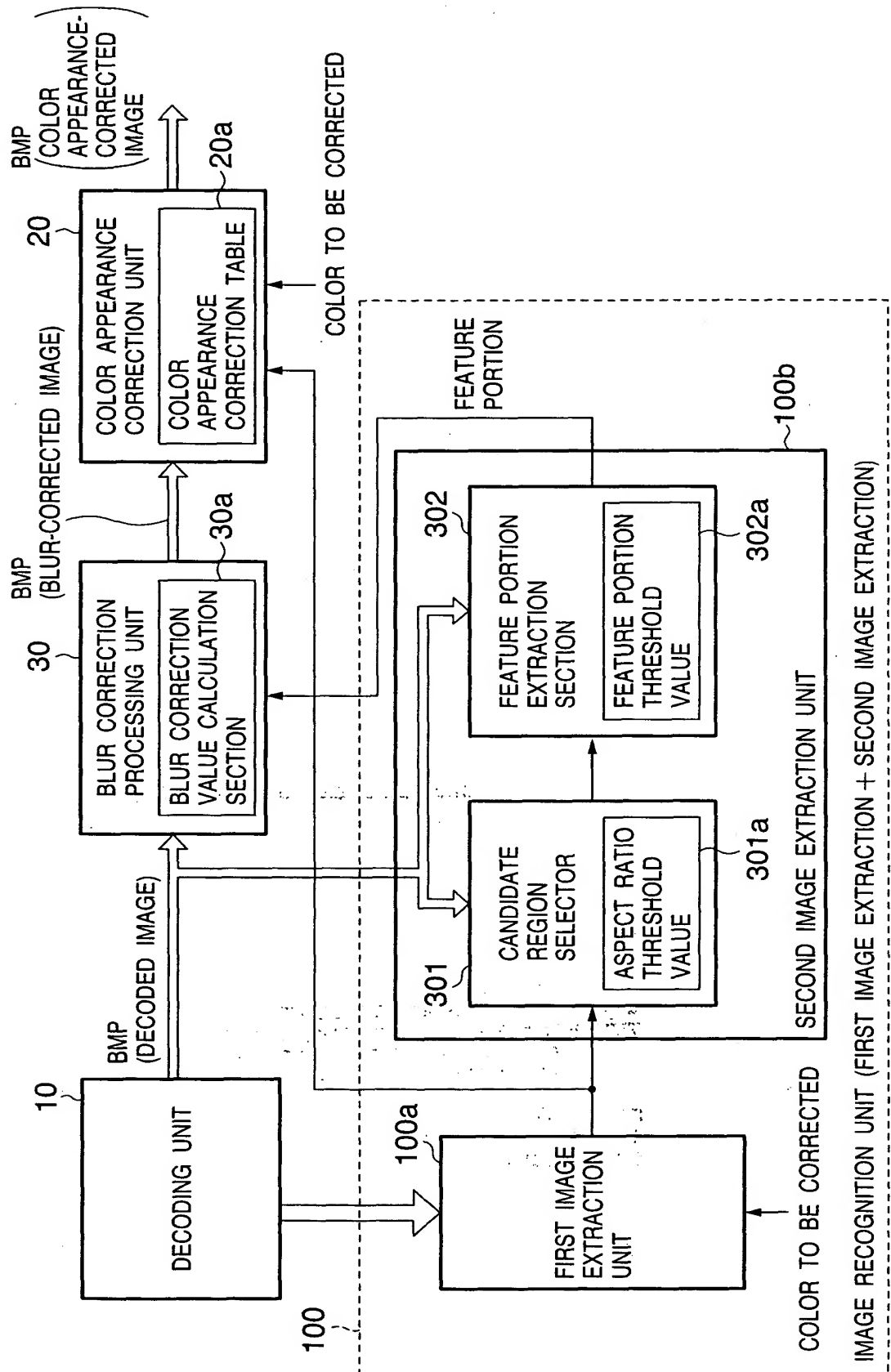


FIG. 51



FIG. 52



FIG. 52

FIG. 52

FIG. 53



FIG. 53 is a photograph of a man wearing glasses and a dark shirt, framed by a thick black border.

FIG. 54

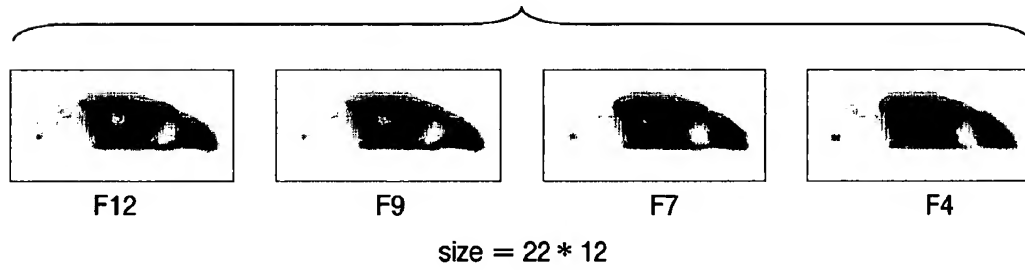


FIG. 55

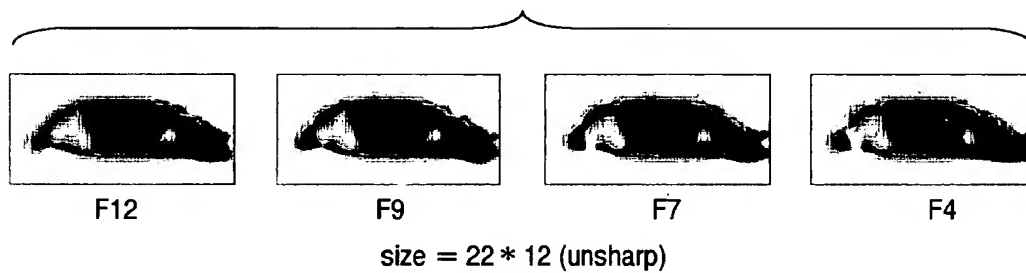


FIG. 56

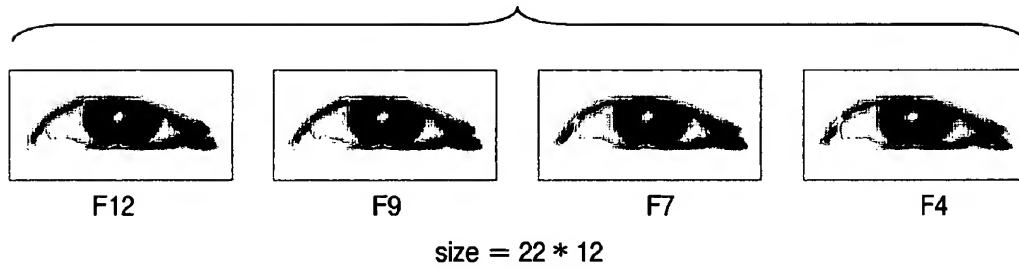


FIG. 57

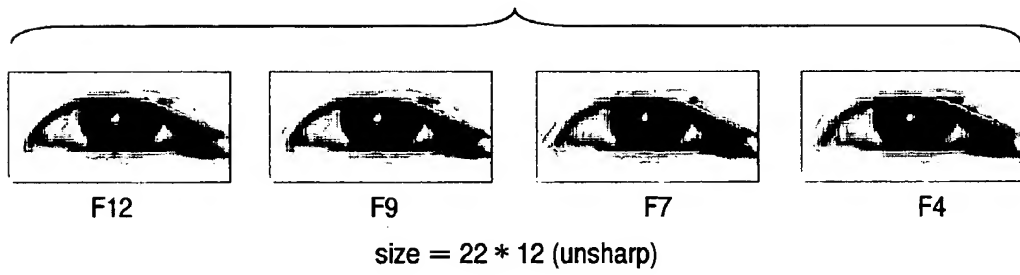


FIG. 58

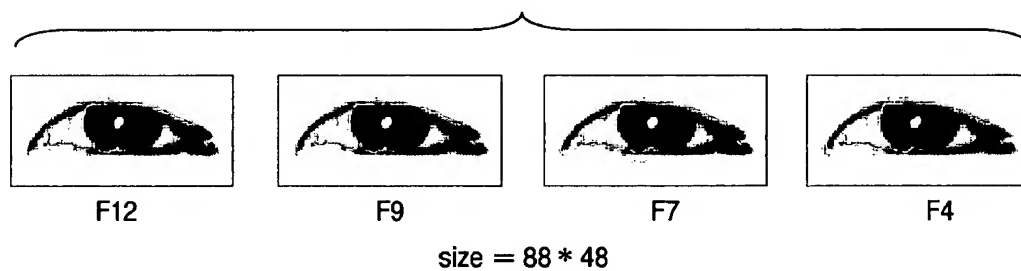
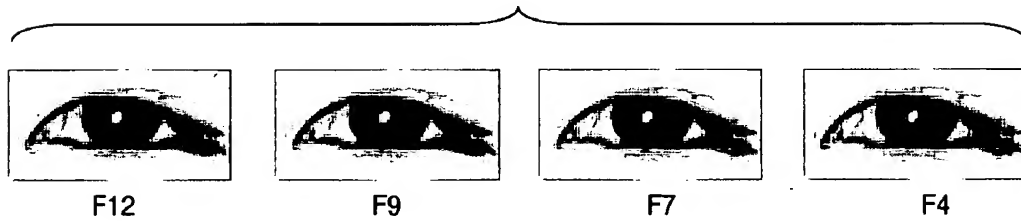


FIG. 59



size = 88 * 48 (unsharp)

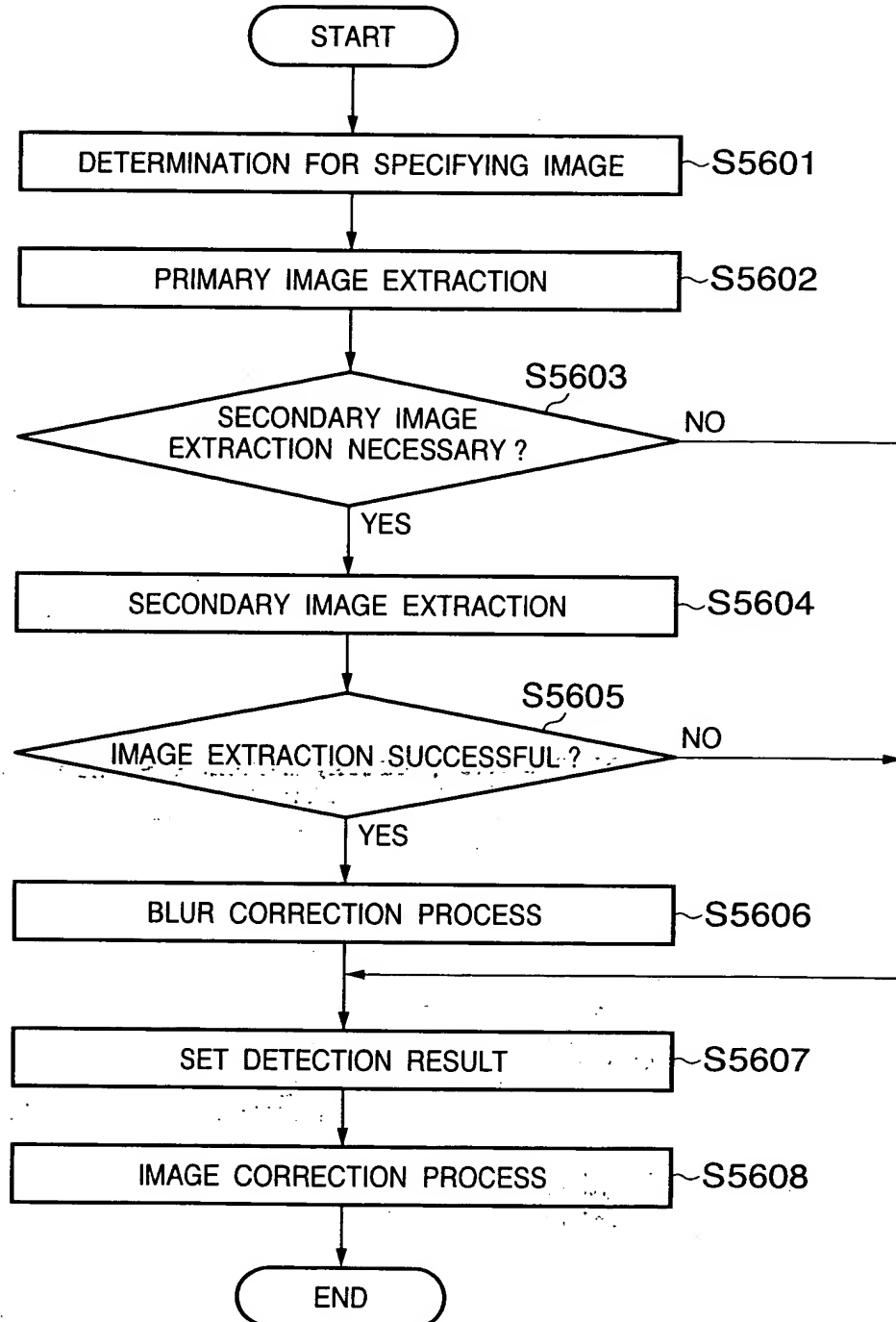
FIG. 60

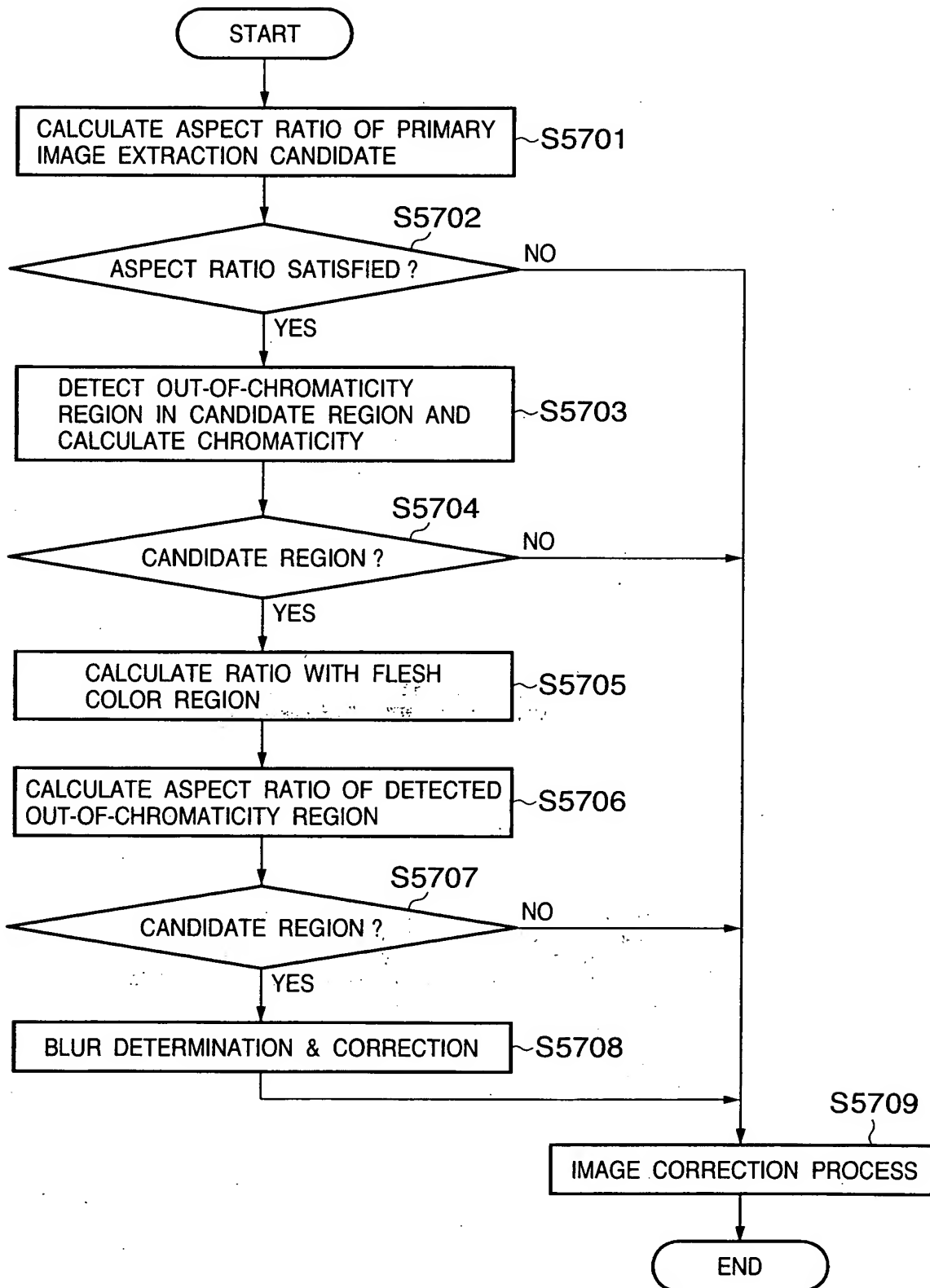
FIG. 61

FIG. 62

DCT CHARACTERISTIC COMPARISON BETWEEN QUANTIZATION
FILTER VALUE AND UNSHARP MASK PROCESS (22*12 SIZE)

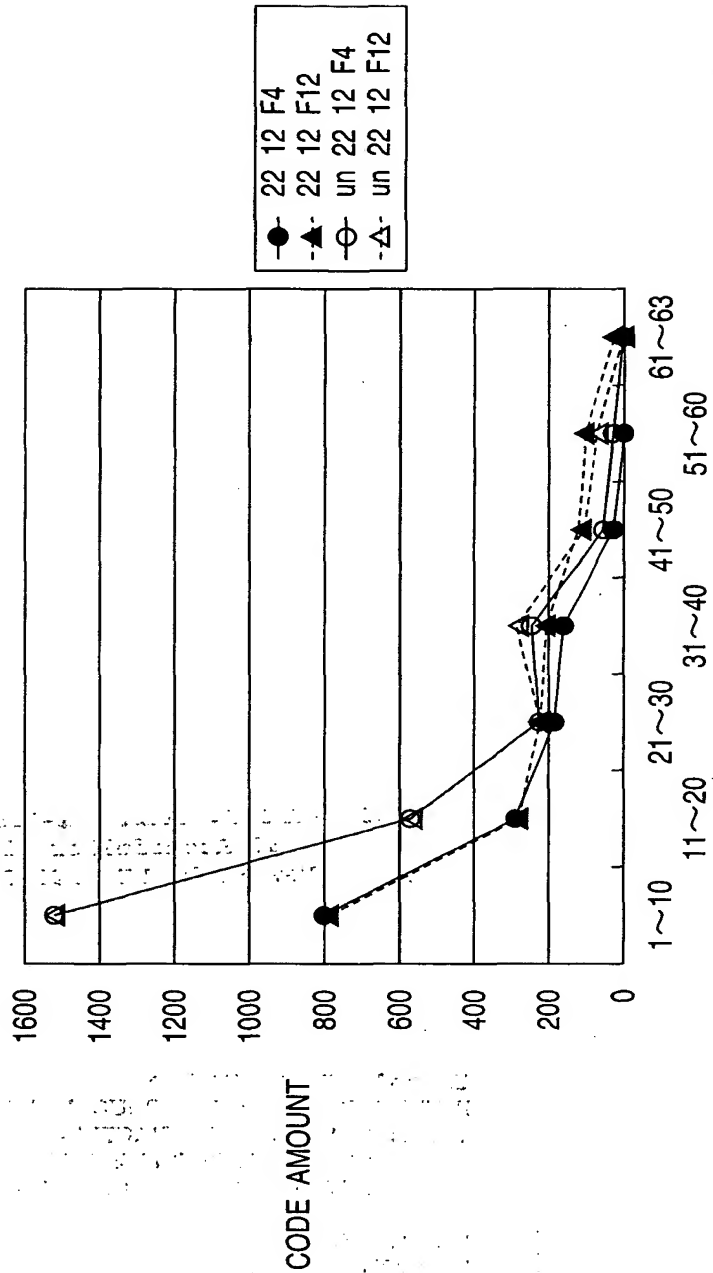
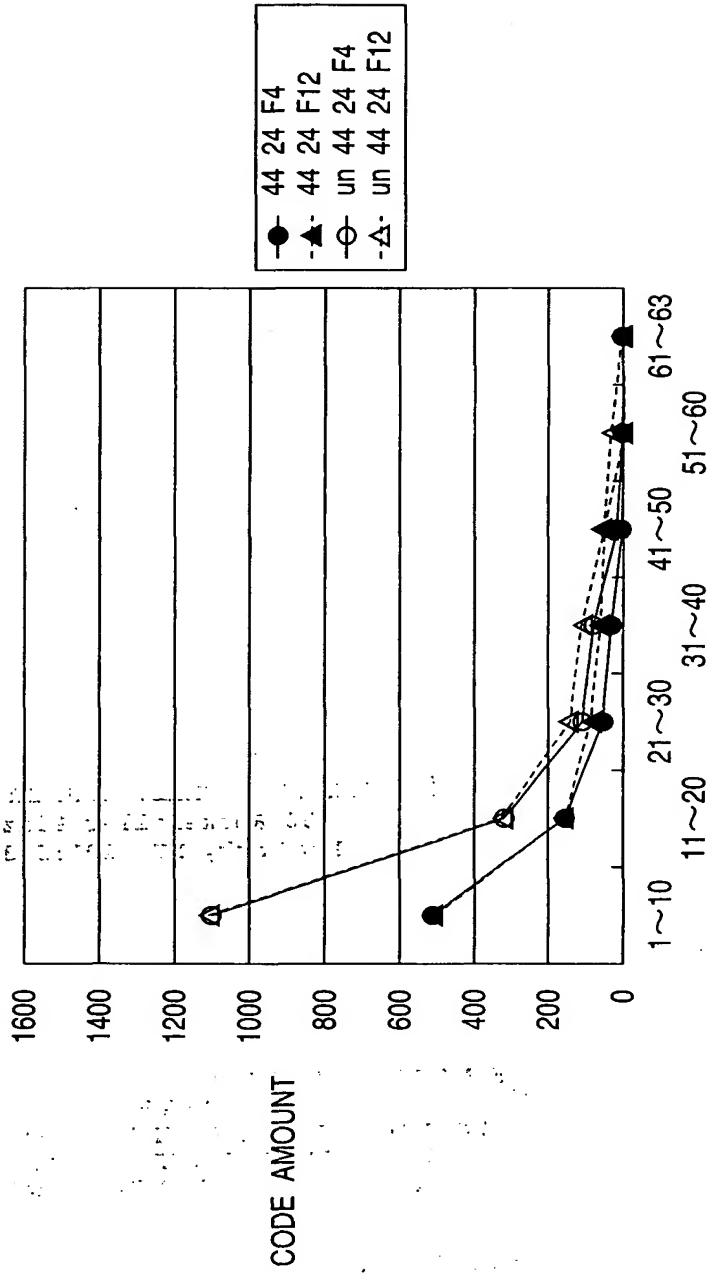


FIG. 63

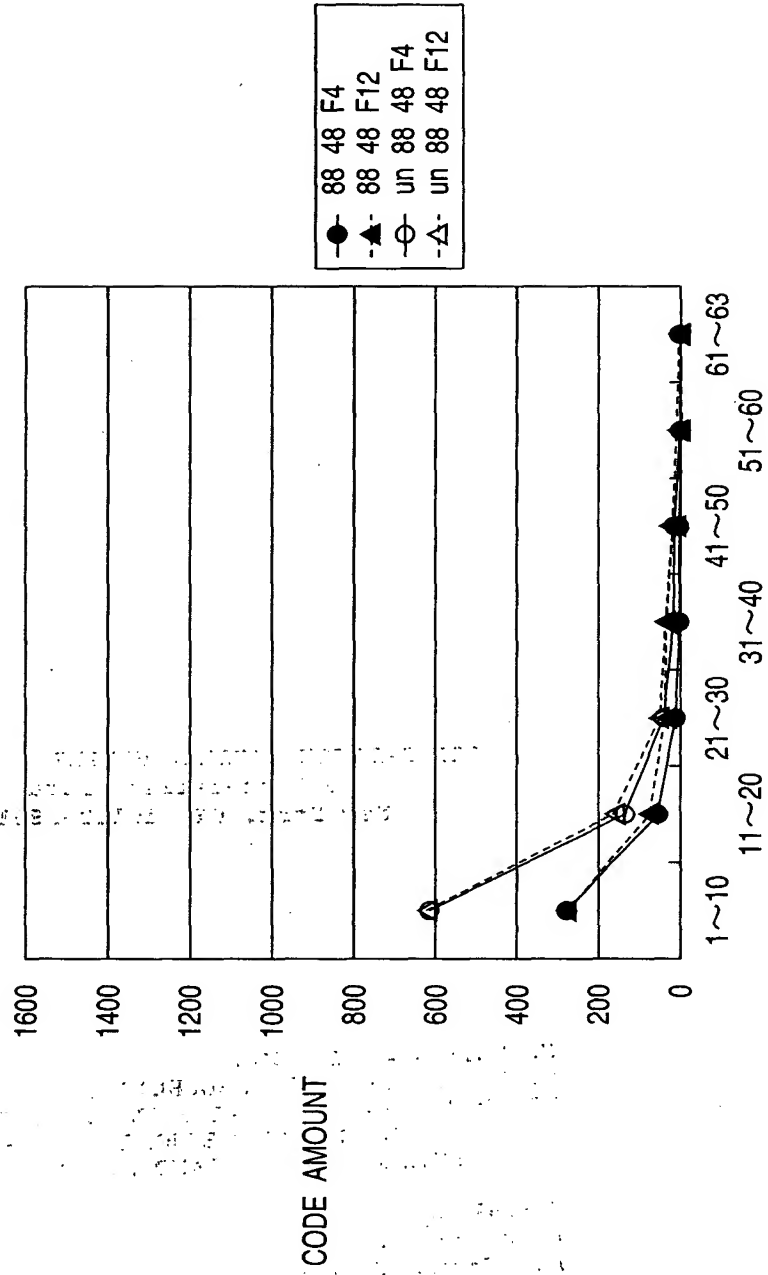
DCT CHARACTERISTIC COMPARISON BETWEEN QUANTIZATION
FILTER VALUE AND UNSHARP MASK PROCESS (44*24 SIZE)



AC COMPONENT (UNIT : 10 BLOCKS)

FIG. 64

DCT CHARACTERISTIC COMPARISON BETWEEN QUANTIZATION
FILTER VALUE AND UNSHARP MASK PROCESS (88*48 SIZE)



AC COMPONENT (UNIT : 10 BLOCKS)

FIG. 65

	QUANTIZATION FILTER		
	≤ 500	$500 <$	$1000 <$
~6 BLOCK	MIDDLE	STRONG	STRONG
~20 BLOCK	WEAK	MIDDLE	STRONG
~66 BLOCK	—	WEAK	MIDDLE

FIG. 66

	FLESH COLOR REGION LUMINANCE RANGE		
	$80 \leq$	$80 <, \leq 150$	$150 <$
STRENGTH	WEAK	MIDDLE	STRONG